Herbology 101

Fundamentals of Flora: "Groundwork"

With Professor Rowan

Herbology 101
hogwartsishere.com

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Lesson 1:
Introduction



Hogwarts Greenhouse #2

Introduction

Welcome to Herbology 101! I hope you're all as excited to learn about plants as I am to share my knowledge of and passion for them with a fresh crop of students. While I want to dive right in and get our hands dirty, this introductory lesson needs to cover a few important topics first. As you may have guessed, this year is about laying the "groundwork" – please pardon the pun, though you will need to get used to that habit of mine – for your herbological education. In this lesson, we will be discussing just what herbology is, some of the expectations of this course, and some formal, administrative information we need to get out of the way. We will start looking at plants in earnest in Lesson Five.

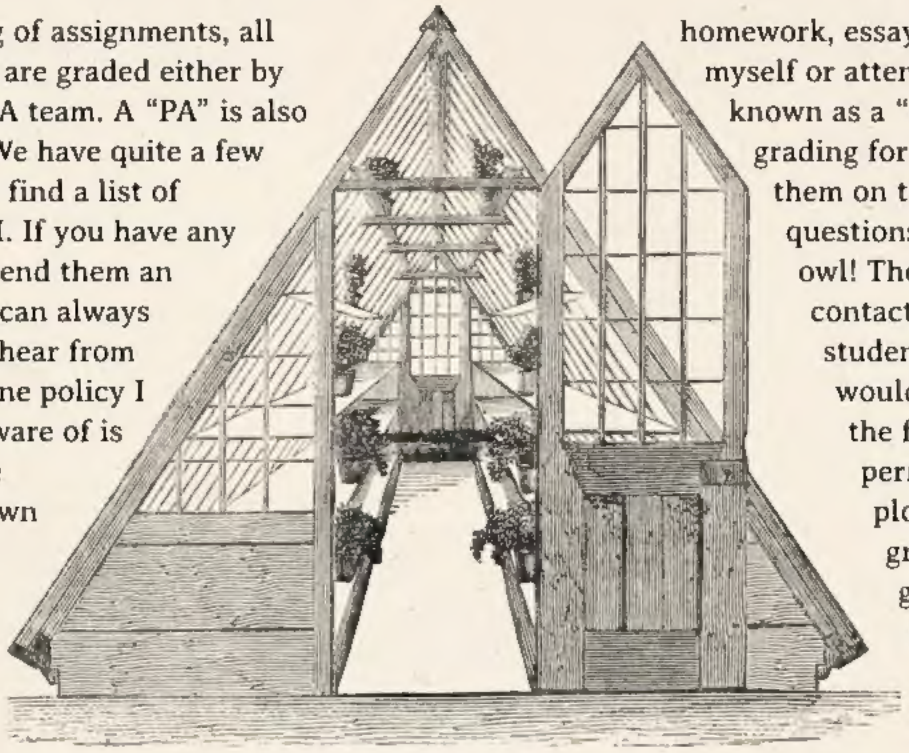
Now, just because we're not tackling Fanged Geraniums on our first day, don't be lulled into a false sense of security. Let it be noted that this course is not for the squeamish or faint of heart! Plants can be dangerous little things! While they are not creatures like the mighty dragon, nor beings like the impressive vampire, plants can be just as complex and difficult to deal with. Over the next few years, you will find that there are many parallels between plant behavior and animal behavior. Some even display quirks that a human might have! For these reasons, and for many others, you will be expected to treat all plants with the care and respect they deserve.

Course Information

I am Professor Rowan, and I hope that we will get to know each other very well over the next seven years. I am passionate about herbology, so if you have questions on the material – either because you don't understand, or are curious and want more information – I am available for questions or concerns. In the meantime, I look forward to grading your assignments, getting to know you, and running into you around the castle.

Before we go any further, I should tell you that HiH has been created in the hopes that magical students around the world will be able to get a magical education in a way that is accessible and self-paced. Too many magical students, particularly Muggle-borns were not able to receive their letters during Voldemort's rise to power and, embarrassingly, slipped through the cracks! Additionally nowadays, many witches and wizards are choosing not to skimp on their Muggle education and attempt to attend both schools side by side.

As I mentioned, courses are self-paced in the hopes of making them more accessible for everyone. This means there are no due dates. You can space out the nine lessons in each course over an entire calendar year, or attempt them all in one, highly-motivated week! However, I do have to recommend you stop to sleep, at least. After reading the lesson, taking notes, and asking questions to make sure you understand everything, dive right into those assignments, which are attached to each lesson. At the end of each year will be a final exam, and at the end of your Fifth and Seventh Years, there will be intensive cumulative examinations to test your knowledge... but let's not worry about them now and put the cart before the Thestral!



Speaking of assignments, all homework, essays, quizzes, and the like are graded either by myself or attended to by our lovely PA team. A "PA" is also known as a "professor's assistant". We have quite a few grading for our course, and you can find a list of them on the class page on HiH. If you have any questions, don't hesitate to send them an owl! Though, of course, you can always contact me as well. I do love to hear from students.

Lastly, one policy I would like to make you aware of is the fact that all students are permitted to have their own plot in the public greenhouses. You may grow whatever you would like from your year's shelf, which will contain cuttings, seeds, and bulbs that we will discuss throughout the year. They are clearly labelled, so be sure not to go above your year without express permission from me. Of course, I would highly recommend you wait to grow a plant until we have gone over it in class, or after you have done research in the library and asked any lingering questions regarding their care. As long as you do not abuse this privilege, this opportunity will be open to you for as long as you continue your herbological education!

Grading Information

There are just a few other pieces of business and administration to get out of the way! First of all, we should talk about how your grades will be calculated. There will be an assortment of assignments in this class: from quizzes, to essays, to exams. Each essay will have a rubric that specifically states what requirements you will need to fulfill. As a general advisory, be sure not to include any identifying marks unless otherwise noted in the assignment. We keep things strictly anonymous to make sure everything is fairly graded! However, as a word of warning, be sure not to plagiarize, either by using someone else's work or by copying and pasting from the Herbology lessons, as any assignments found to be plagiarized will immediately receive a 1% and you will not be able to retake that assignment.

IMPORTANT - Your assignments will be marked for both content and language. If you have any concerns about this because you are either not a native speaker of English (NES) or have a learning disability (LD), please put the label NES or LD on top of your essay. My PAs and I will then know not to deduct points for language mistakes while still keeping the queue anonymous. You may use a translation app to help you translate your assignment into English. As those tend to mess with our grading process, only assignments submitted in English will be graded.

Lastly, in case you aren't sure about the grading scale here at Hogwarts, we will take brief moment to look at it. Grades range from "Outstanding" at the highest, to "Troll" at the lowest. Below is a complete chart for you to review at your leisure. If you have an issue with a mark you've received, you can discuss it with me via owl. I will be unable to do anything until the "appeal" function is back online, but I can, at least, be aware.

Grading Scale

Outstanding – 90-100%
Exceeds Expectations – 80-89%
Acceptable – 70-79%
Poor – 60-69%
Dreadful – 50-59%
Troll – 0-49%

Finally, we can get to the good stuff – though, I may be a bit biased – herbology! Below is a peek at what we will be studying this year.

Year One Syllabus

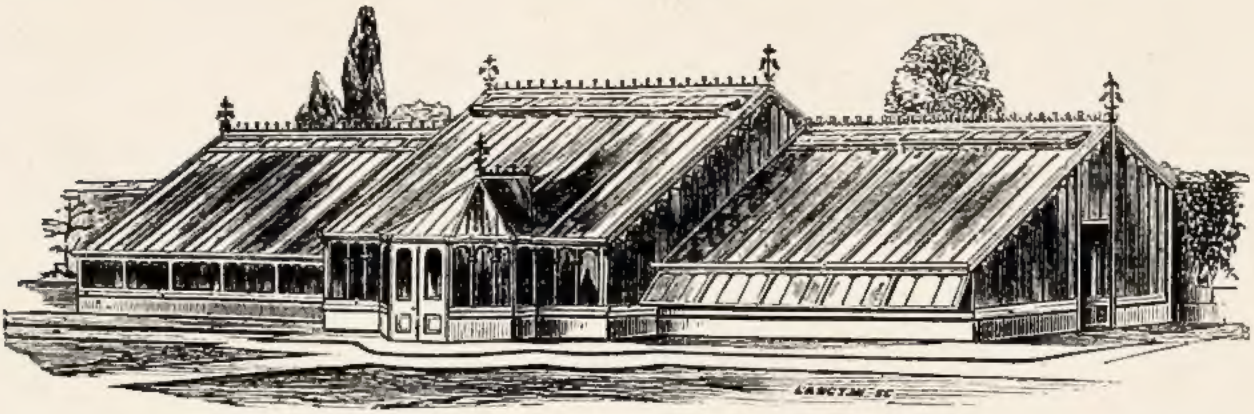
Lesson #	Title	Topic(s)
Lesson One	Welcome to Herbology	Administrative Details, Introduction to Course
Lesson Two	Tools of the Trade	Basic Equipment
Lesson Three	How to Train Your Snapdragon	Basics of Caring for Plants
Lesson Four	There's Magic in All of Us	Definition of Magical Plants vs. Non-Magical Plants, Roses
Lesson Five	Basic Blooms: Part I	Easy to Grow Plants: I
Lesson Six	Basic Blooms: Part II	Easy to Grow Plants: II
Lesson Seven	Hazardous Herbs	W.H.I.P.S. Classes
Lesson Eight	Grouping Your Garden	Classifying Plants, Labeling for Storage
Lesson Nine	Herbology Intertwined	Cross-Curricular Uses of Herbology

Now, what *is* herbology? Herbology is the study, along with the use, of magical and non-magical plants. Yes, we will be studying both! You may find this odd, but as we will discuss in later lessons, just because something is not magical does not mean it is useless! These plants we study may be for medicinal, protective, educational, or purely decorative purposes. Each herb, fungi, tree, and flower whether magical or "mundane" has unique quirks and gifts, rather like each and every one of you. By mundane, I am of course referring to non-magical plants, however, due to the negative connotation of this term and because it often inaccurately implies the plants lack uses and abilities, you will need to use the term "non-magical" in this class. For example, despite being non-magical, oleander – a very common and equally poisonous garden plant – will kill you just as surely as a Venomous Tentacula if you are not careful. However, there is no need for alarm. As long as you develop a healthy respect for all plants, you will be far less likely to run into this problem!

Of course, this outlook on the importance of non-magical plants occasionally causes herbologists a bit of trouble, resulting in negative opinions of our field or thoughtless nicknames that demean the important work we do. But I'm getting a bit caught up in my own ramblings again. For the meantime, remember that you are not just a simple gardener here in this class. A herbologist is any witch or wizard who understands the

properties and nature of plants, particularly one who uses their knowledge not only to grow said plants, but to enrich the world around them in a multitude of ways.

There are ways wizardkind can benefit from the knowledge and study of plants on both a personal as well as a societal level. For example, it is useful to be able to tell the difference between elder and holly wood when assessing the aptness of your opponent



Beauxbatons Greenhouse

for certain spells during a duel. As a healer, confusing a lesser celandine and a marsh marigold could put your patient into a very deep sleep rather than curing their constipation. Potioneers and healers alike need to be able to recognize the differences between plants and be aware of any toxicity hazards that may need to be mitigated. Don't even get me started on the benefits that magical and non-magical plants offer to the world in terms of providing potion ingredients to cure illnesses, keeping ecosystems in check, and providing nourishment. Needless to say, without proper knowledge of herbology this world would be a far less enjoyable place to live!

Of course, I am bound to have an over inflated opinion of my own course, but let me assure you, Herbology is no soft option! There is much to be explored, and plenty of challenges that await you in the greenhouses, but that will all have to wait for another week!

Closing

That ends your first lesson. Before you go, pick up a copy of the outline for the year so you can plan for what is ahead. There will be an optional introductory essay and a short quiz for homework. Have a great week and I will see you again soon.

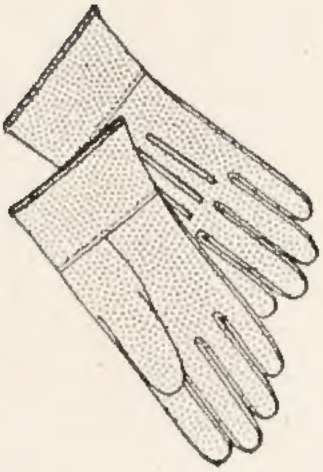
Lesson 2:
Tools of the Trade



Gather 'Round the Greenhouse

Hello and welcome back to the Herbology greenhouse. It's lovely to see you all back here again for another lesson! Our topics today mainly focus on definitions and key terms so we're all on the same page for the rest of our time together. I see some disappointed looks from all of you. Yes, I know, you were likely hoping to tangle with a Devil's Snare like some of your older siblings may have told you about, but we're not quite ready for that yet. This year will contain a lot of theory, but don't worry, Year Two and onward will make up for that! If you find yourself getting impatient, remember, you need to master Lumos before you can even thinking about using Stupefy in a duel. That is, you need a thorough grounding in the basics before progressing. I can't even begin to consider how cross Headmistress Oshiro would be with me if anything were to befall you because I rushed you through the preliminary information.

Protective Particulars



With that, let us jump right into today's lesson. Last week, you learned about just what herbology is and what kinds of topics we will be studying, but you are still missing quite a few pieces of the puzzle. We need to talk about supplies we will be using in class. After all, you wouldn't go to Potions without your cauldron or Charms without your wand! The basic equipment for Herbology can be sorted into two categories. The first equipment that will be discussed is for your protection. This includes items such as dragonhide gloves, earmuffs, and a wand. Without these, you cannot take this course due to safety concerns. Additionally, when doing practical work, it is advised that you wear closed-toe shoes and an apron. On occasion, a mask may also be required if dangerous fumes or scents will be present. On the other hand, you do not have to wear your cloak nor your tie to Herbology class. They can be safety hazards when working with plants, so please leave them in your bags or on the cloak racks provided by the door!

Protective equipment is vital when working with plants. Many of you will have been scolded or warned by your parents not to eat, touch, or even go near certain plants, and rightfully so! Most of you will hopefully have followed those warnings, however, I am sure there are a few rebellious souls here that were either too caught up in exploring to

heed this advice, or were simply little hellions! In either case, I would imagine you are no stranger to Essence of Dittany or the Antidote to Common Poisons. We have a plentiful supply of both of these in all the greenhouses, so if the need should ever arise - Merlin forbid - make sure you avail yourself of our potions cabinets. Just make sure you read the labels and don't mix them up with Flesh-Eating Slug Repellent!

As an interesting anecdote to give context to the gravity of these requirements, I would like to refer you to a popular, British herbological journal. Herbology Today recently published an article on common mishaps when handling plants. In an alarming statistic, over thirty thousand witches and wizards around the world have had preventable accidents in the past year, and 61% of those mishaps involved forgetting or neglecting to put on dragonhide gloves. Sometimes, common sense is the best tool to have under your belt as you deal with plants. Follow sensible rules put forward to avoid incidents in the first place and be calm in all situations that may still arise; panicking has never helped anyone!

Tools for Tending

The second set of equipment revolves around caring for plants and consists of dragon dung, Mooncalf dung, and centaur tears. There are far more potions, lotions, tinctures, mixtures, and sprays to aid the growth of your plants as well as combat common issues that herbologists encounter, but these three are the essentials that everyone must be aware of.

Dragon dung is exactly what it says on the tin: the stool of any dragon. This can be used as a fertilizer for soil, or mixed in with compost in order to make a more delicate organic fertilizer. The reason that dragon dung works so well is due to the acids found in dragons' stomachs which are related to their fire-breathing abilities (though some say it has to do with how inherently magical these beasts are, as well). These acids break all materials down to their most natural state, which, as you might guess, is very useful in herbology! Another quality unique to dragon dung is that it is scentless, and will thus bother neither you nor the plant. The lack of scent found in dragon dung is reputedly due to the fact that the dragons use all odorous gases in the production of their fire, although neither dragon



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keepers nor magizoologists have ever been able to confirm this as fact.

Mooncalf dung is also used as a fertilizer. It is a more gentle option - even gentler than dragon dung-based composts. Because of this, Mooncalf dung is preferred for planting and caring for more sensitive or fragile plants. On the other hand, Mooncalf dung does not have the potency of dragon dung. If the soil is worn down, or stripped of vitamins and minerals, Mooncalf dung may not be powerful enough to compensate for the lack of these nutrients and to contribute what the plant requires to grow strong.

Centaur tears are a favourite drink for most plants, which is part of the reason why you will find centaurs living amongst an abundance of healthy flora. More vitamin-rich than regular water, centaur tears are capable of reviving a plant moments from death. However, I should note that some plants find them toxic. Specifically, never water a plant which grows in salt water with centaur tears, as they will not fare well.

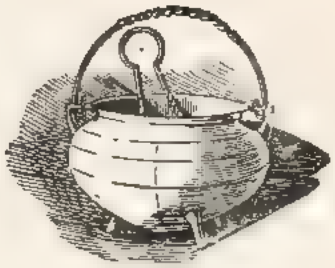
It is also important to note the ethical issues surrounding the usage and collection of centaur tears. Centaurs are known for their troubled history, aloof nature, and intense study, particularly with respect to astrology and herbology. These "beasts," as classified by the Ministry, are actually equally as intelligent as humans, if not moreso. They take very good care of the land in which they live and the surrounding plants and ecosystem, using their tears as needed.[1] It is rare, but some individuals have been noted to form bonds with centaur clans, notably Albus Dumbledore and Rubeus Hagrid. Such persons have been able to arrange an agreement with the centaurs who will provide a supply of tears, as long as they can trust the tears will be used for the betterment of plants, or nature in general. Due to the rarity of this situation, some witches and wizards will try to obtain centaur tears by nefarious means too upsetting to discuss here. Ministry laws protect centaurs, but it is common knowledge among herbologists that some vendors could potentially slip through the cracks and are not as reputable as others. These ethical issues are still being dealt with by the Ministry, as well as commonly debated at herbological meetings.

[1] While it may be humorous to imagine the normally stoic centaur dramatically weeping all over the forest in an attempt to water the plants, I must disappoint you. Most commonly, centaurs collect their tears in lachrymatory vials, or tear catchers (which are glass vials designed for the storage of the salty substance), and then distribute the collected tears as necessary. As you might imagine, such long-lived creatures have seen many things in their lives and often have periods of contemplative mourning during which time they collect any tears shed. Fortunately, these tears are incredibly potent and only a single tear is required to produce a great effect!

Cauldrons

Now, as our last topic of the day, we will touch on cauldrons. I know you will likely have discussed cauldrons in detail during your Potions classes, however, there are a few specific things that must be noted when brewing plants. We will be going over how plants are observed to interact with the corresponding metals of each kind of cauldron. There is no bad cauldron, so after reading these, don't feel as though you have to go out and buy a new one by any means! There are just some considerations to be made and things to look out for with each type. For example, if you know your cauldron doesn't fare well with burning plants, you will need to keep a close watch on any potion you're brewing that includes them as an ingredient.

Pewter



These cauldrons are good for beginning brewers and are used here at Hogwarts. However, because their melting point is on the low side, they tend to be prone to melting and explosions. In fact, if you are not wary when working with reactive plants, the edges of the cauldron will wear down, forming small chunks that collect at the bottom of your potion. Fortunately, should this happen, you may be able to salvage the potion by filtering out the pieces of metal, as pewter does not react or mix with organic material. Additionally, when using plants of a high toxicity level, should your cauldron happen to melt or explode - and in some way shower you with your half-created, toxic potion - you won't like the result. My final word on pewter cauldrons is that if your potion only includes basic herbs or plants with lower levels of toxicity and reactivity, pewter is an excellent, inexpensive choice and should serve you well through your first few years of potion making.

Brass

Brass has a higher melting point than pewter, at roughly 920 degrees Celsius. It is also resistant to wear and tear from burning plants (a class of plants we will talk about in more detail in Lesson Seven), which also gives it a leg up on its pewter cousin. However, should any plant material get stuck to the cauldron and start burning, it will react with the metal and start emitting a green-blue fire and release zinc into the air, so if that happens, be sure to call a professor or an experienced adult over to deal with the fumes!

Copper

Right away I'll have you know that I'd give copper an excellent rating for use with plant-based ingredients. Not only is copper completely recyclable - the material can be

used again with no loss in quality - but it also has the highest melting point of the three most common cauldrons at 1,085 degrees Celsius. Additionally, copper can withstand the same class of burning plants as brass and can also handle some select plants of the reactive class. It's one of your safest bets in terms of wide usability with all plants while still taking price and practicality into account.

Silver

Nocturnal plants are especially well-suited to being brewed in silver cauldrons because of this metal's ability to be used alongside certain phases of the Moon to amplify properties. Silver can withstand a little more heat than brass, melting between 780 and 962 degrees Celsius. I really don't recommend getting a silver cauldron unless you are paying for a pure silver one, as overestimating your melting point and heating the cauldron higher than it will result in your cauldron and potion mixing. Worse, if your potion involves particularly reactive plants, this fusing may cause a bit of a boom!

Gold



If you would like to have a cauldron fit for a king or queen, the good news is that you can attempt to convince your parents you need one for advanced potion making, as it interacts well with all plants. While its melting point is not technically the highest, at 1,064 degrees Celsius, the metal resists acids released by plants, making it ideal for all plants of all classes and categories.

However, though it may be tempting to buy cut-rate, cheaper versions of gold cauldrons on the market, I must insist you avoid them at all costs! These heavily discounted cauldrons almost always include pyrite or "fool's gold." As you may know, pyrite is banned from use in cauldrons by the Ministry of Magic, and for good reason. There is no problem with the melting point (1,100 degrees Celsius). However, it reacts with not only plants, but also with heat and water, which is not ideal at all for potion making!

Closing and Assignments

Phew, that was quite an information-filled lesson. I hope you're catching on to these fundamental definitions, but if you have any doubts, please don't hesitate to contact me or any of my PAs. For now, I'll bring class to a close. For your homework this week, you have just one assignment, a quiz on the supplies you need for this class. Until next time!

Lesson 3:
How To Care For Your Snapdragon



Antirrhinum majus

Welcome

Hello again, students! Come in, come in. Welcome back to Greenhouse One. Today we will be going over the basics of how to care for plants. As this is a compulsory subject, I know many of you have been dreading attempting to actually care for a plant, but even those of you with black thumbs can overcome your plant-based fears! There's really nothing to it other than a little tender, loving care. In addition to basic plant needs, we will go over a few simple, but useful, spells, the general life cycle of a plant.

Basic Plant Needs

The basics of herbology extend to understanding that each plant has its own unique requirements as well as special qualities. I'm sure all of you know that plants need sunlight, soil, and water to grow, but you may be a little hazy on the specifics. In truth, those specifics vary from plant to plant. While some of this will seem to be common sense – the Morphanous Cactus will not grow next to the ocean, just as the Aquagius Root will not grow in a dry desert – some of the finer details are lost upon uneducated witches and wizards. Therefore, it is not just as simple as sticking a plant in some dirt and watering it every day. For some plants, this may even weaken or kill it! While it's important to consider an individual plant's needs before planting, we will only touch upon the fundamentals today.

Sunlight

While we will be talking more about the various kinds of sunlight in Lesson Eight when we discuss plant categorization, it is important to note that not all sunlight specifications are what you would assume. There are, in fact, plants that are placed in deep shade, rather than in the sun, and thrive there. In fact, some plants cannot handle direct sunlight at all!

When planting, you need to make sure that you know how much sun an area gets during a normal day, yes, but there are many other specifics to consider. Not only is how many hours of sun that patch gets an important factor, but also when those hours are. Sunlight during the morning, afternoon, or evening can have different effects on a plant, depending on its fragility. Some plants cannot handle the intense morning rays, and prefer to soak up the gentler evening sun. With all that out of the way, you also need to note how much shade an area receives before you plant anything there, as many plants

cannot handle direct sun for more than a few hours at a time, depending on their sensitivity.

Water

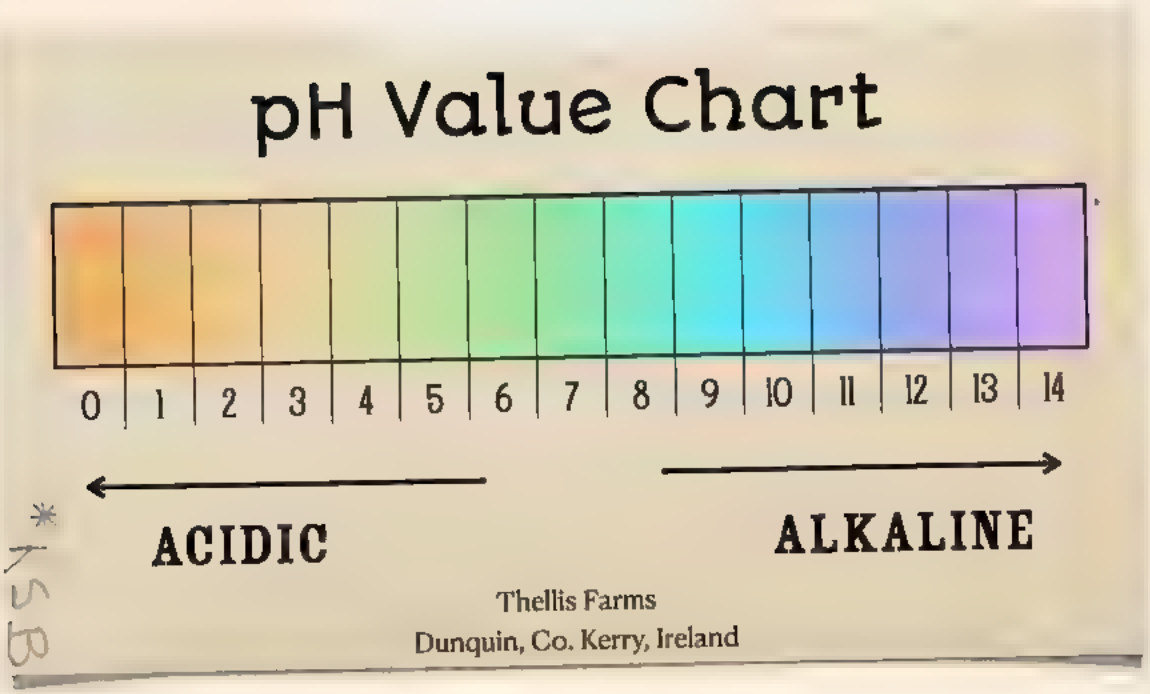
Perhaps this has happened to you: you carefully water a plant every day with high hopes for it to blossom into a beautiful, full-grown plant. Instead, it begins to wilt and droop. Desperately, you water it more, assuming you have neglected it somehow, and yet it makes no improvements. If this has happened to you, don't despair. You were likely dealing with a plant that doesn't like being overwatered. As stated earlier, every plant has personal needs and preferences, and some plants simply cannot survive with too much water! Succulents, for example, may comfortably go weeks without water, so it's all a matter of knowing the kind of plant you're dealing with. Additionally, when watering a plant, you must also consider the drainage of the area you are watering. If it is a potted plant, does the container have drainage holes? If not, you will need to water less frequently, as no excess water will be able to escape and overwatering may cause root rot or other complications. If the plant is outside, you must consider if the soil is very fine or rocky in order to make this same judgement.

Soil

It may surprise some of you to know that not all soil is created equal. Different areas of land have different nutrient levels, which depend on climate, what other plants have grown in the area, and other extraneous factors. It is important to know what kind of soil you have and, as mentioned above, if it's fine and sandy, rocky, or rich with loam. Additionally, knowing if it is nutrient rich or stripped bare is useful. Along those same lines, the pH balance of the soil is quite important and can either help or hinder the growth of your plants. For those of you who are not aware of what the pH scale is, it simply measures how acidic or basic a substance (in this case, soil) is.

The range as it pertains to soil is generally from 4.5 to 9, though the entire scale reaches from 0 to 14. 7 is considered the neutral point from which basicity and acidity are measured.[2] If your soil is above 7, it is basic. If it is below 7, it is acidic. Most plants prefer somewhere in the mildly acidic to neutral range because of the minerals present in those types of soil, but I will note it when possible! Fortunately, there are plenty of Muggle and magical soil supplements to adjust and correct the soil if it is not at the right level for your needs, which we will discuss more in depth at a later date. To ascertain the pH of your soil, there is a spell you can use to test the ground. The spell's details are below and it will reveal the pH level by producing a colorful mist that rises up to hover above the ground. You can then compare this mist to a color chart to narrow down your soil's pH. At the front, I have sturdy cards with the color chart printed on

[2] It is important to note is that "alkaline" is often used interchangeably with basic. This is not strictly true, but as long as you are not confused by the presence of a second term, that is all that matters. Essentially, alkalis are bases, but not all basic substances are alkaline. Therefore, base is the broader term. This is why the color cards I supplied read "alkaline" instead of "basic," though both are useful terms. Additionally, it's good to note that this terminology can also apply to potions, for example.



them.[3] They should prove very useful, as after you cast the spell, you can simply hold the card up to the mist to decide what color it is. There are enough for all of you and are yours to keep, so don't forget them on your way out. There are also Muggle scientific tests that can be done, but I am not an authority on those! The wand movement can be a little tricky, so I have included a diagram as to how exactly to move your wand.

The pH Detection Charm

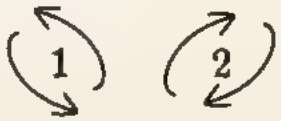
Incantation: Acidius revealius

Pronunciation: Ah-SID-ee-us reh-VEH-lee-us

Wand Movement: 2 curved blades of grass (start at bottom and curve in, then out)

Willpower: Low

Concentration: Low



[3] Included chart is ©2018 Thellis Farms, LTD. Used with permission.

A Little TLC

While most plants are not sentient (we will be discussing the exceptions to this rule next week), they will thrive if you treat them that way. Think of it this way: would you ever buy a pet without knowing what it eats or in what kind of cage or living accommodations it needs to be kept? Of course not! Similarly, when you set out to take care of a plant, make sure you know how much shade or sun it needs, how often you should water it, and any other special considerations necessary. The more care and attention you pay a plant, the less likely you are to have a brittle, dead stalk of dittany on your hands.

Along the same line of thinking, if you attempted to go days without feeding your Kneazle, you'd have a fairly irate feline on your hands, as well as two very stern Care of Magical Creatures professors. This concept applies to plants as well. While you don't need to "feed" it every day, checking on your plant at least once a day is a great habit to get into. This makes sure you never miss a day on its watering schedule, it gets pruned when dead foliage weighs it down, and that if signs of sickness show up, you catch on immediately. Even if the plant requires no care that day, it makes sure you never neglect your plants for too long, and also makes you more familiar with your plant so you are more easily able to tell when something is amiss.

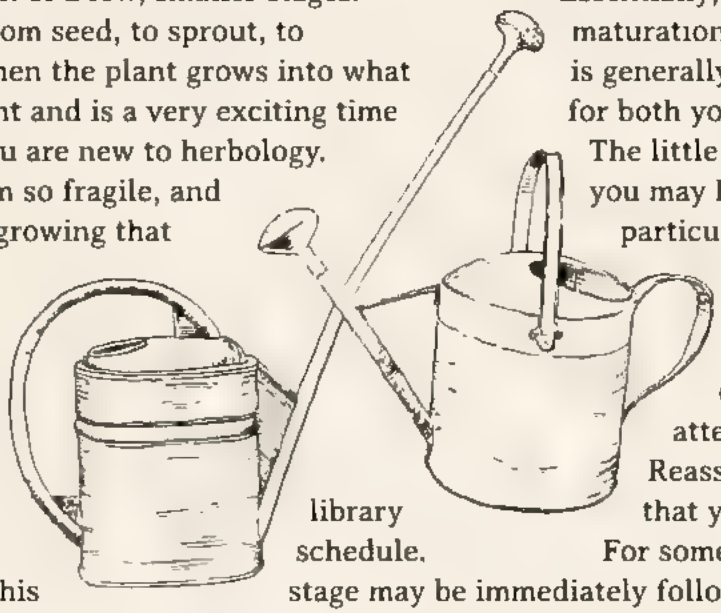
Another thing I would highly recommend in terms of caring for your plants is singing to them. Some plants, particularly magical ones, have a sort of sense of what is going on around them even if they are not sentient. It has been hypothesized that singing is beneficial to the growth of plants, though perhaps it just makes us enjoy taking care of them more, and therefore makes us more likely to do it! No matter the cause, there does seem to be a correlation between plants that get sung to and plants that thrive, so give it a try! The plants won't mind if you're an alto, a tenor, or can barely carry a tune. In my experience, roses enjoy a good love song (I like "Kisses Sweeter than Wine" and "December's Rose"), and I find that vines thrive on jazz. Autumn and winter blooming flowers often enjoy songs with sad lyrics, such as "The Phoenix Lament" by the Ministry of Magic. Additionally, as might be expected, trees tend to like older songs, so with them I stick to hymns and symphonies. Interestingly, bushes often like songs that have attitude and dangerous plants might very well have a preference for something with a bit of humor. If that is too much to keep straight for you, don't worry, any song is better than none. Just sing what comes to mind and make tending your plants go a little bit faster!

The Life Cycle of a Plant

Lifespan is a delicate topic due to the fact that we often must cut a plant's life short for medicinal or experimental purposes. Ignoring these occurrences, a normal plant's lifespan can range wildly, between mere weeks and five thousand years – although the records kept on these much older plants lack sufficient information on planting dates to confirm this. As a rule, your average annual plant, like pansies or peas, have the shortest lifespans, whereas trees tend to have the longest lifespans. However, cacti also have lengthy lives. A plant's lifespan becomes important when considering the many stages of a plant's life. If it is relatively long-lived, the harvesting stage may happen repeatedly, over many years, or may only happen once after a very long wait. On the other hand, if a plant is rather short-lived, you must be prepared to repot or harvest it fairly quickly. These are just a few of the things we should consider during the rest of the lesson.

Growing

Those of you with some experience with plants know that this stage is an oversimplification of a few, smaller stages. Essentially, we are combining the plant's life from seed, to sprout, to maturation. This stage typically ends when the plant grows into what is generally recognizable as a fully-formed plant and is a very exciting time for both you and the plant, particularly if you are new to herbology. The little shoots that you are tending may seem so fragile, and you may have little experience with growing that particular type of plant, but the most important thing you can do during this stage is be patient and aware of your timeline. Don't overwater or disturb the plant in an attempt to get it to grow faster! Reassure yourself by checking in the library that your plant is growing according to schedule. For some plants, particularly flowering ones, this stage may be immediately followed by germination or reproduction, to allow for the next generation to continue.



Repotting

Repotting may be required quite often, or not at all, depending on how you are caring for your plant. Naturally, an outdoor plant will not need to be repotted, for example! A plant needs to be repotted when it has grown too big for its current container and has stopped growing due to a lack of room, or has even begun wilting because of it. The

plant will enjoy the extra breathing room of a new pot, and this will often boost a plant's growth. Because of this, at the time of repotting, a plant's diet may change. Flesh-eating plants usually double their intake, while Gaviat Roots will eat two-thirds less than before. While most plants will require the same amount of sunlight, the amount of water needed will often either increase or decrease. All of these factors are very important and not to be taken lightly.

Harvesting

Again, depending on the plant, harvesting may happen rather frequently. This typically involves cutting off one piece of a plant for use apart from the original plant. For example, picking an apple off of a tree is the harvesting of apples. With some plants, like an apple tree or dandelions, harvesting can be as simple as plucking something with your hands. However, with some more finicky or dangerous plants, using your hands (even with dragonhide gloves) may not be an option. When this is the case, we use a handy spell called the Severing Charm. You will be studying it again later – though in a different light – in Charms class, so if you have any questions feel free to approach Professor Virneburg or myself, but the spell's details are as follows:

The Severing Charm

Incantation: Diffindo

Pronunciation: deef-IN-doe

Wand Movement: V-shaped
(Down, then up, then end with swish toward target)

Willpower: Low

Concentration: Moderate
(position and depth of cut)

Closing

That's all we have time for today! I hope you are leaving today's class a little less nervous about growing your plants and more confident in your abilities. Next week we will touch on what differentiates a magical plant from a non-magical one and look at an example. Don't forget to take your quiz on your way out!

Lesson 4:
There's Magic In All Of Us



Achimenes longiflora

Introduction

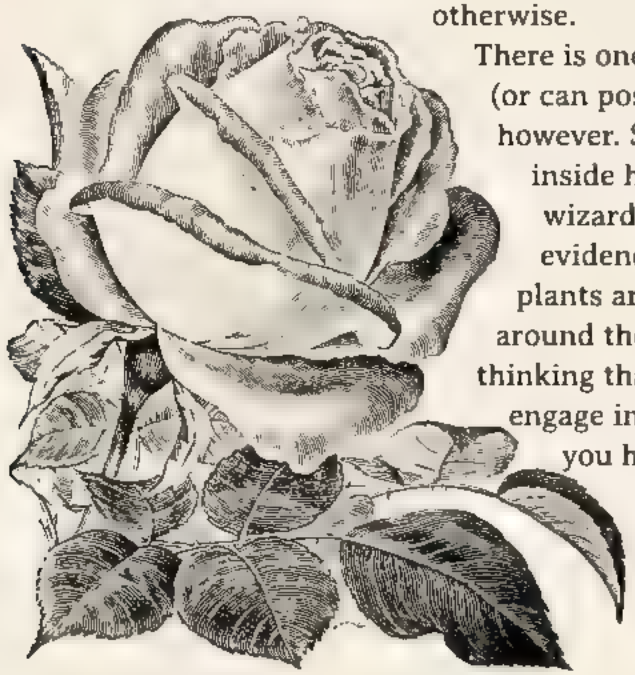
Gather 'round, students. Yes, come right up to the front; that's it! You don't want to miss today's topic, that's for sure. In this lesson, we will be differentiating non-magical plants from magical plants. Interestingly, it's not quite as obvious as you would think. I also have an example of a non-magical plant here, as I see many of you have noticed. We will be talking about these beautiful roses as a way to help drive home the distinction between magical herbs and their counterparts.

Magic in the Air

Let's get started, shall we? I went on and on in your first lesson about how non-magical plants are important and can actually be very useful. The truth is, witches and wizards can - and do - use both magical and non-magical plants in their day-to-day lives. There are scores of non-magical plants used in even some of the most complex potions! Because of this, using a plant in a potion is not enough on its own to make the chosen herb be considered magical. After all, salt, bits of armadillos, horses, and crocodiles are ingredients in magical potions. Likewise, having an innate useful effect (healing or otherwise) does not make a plant magical. To qualify as magical, a plant must either exhibit odd behavior or it must have unique abilities. These abilities can be of the plant itself – like Creeping Ivy's ability to move at will – or it can grant a unique ability to anyone who uses the plant, such as the gill-bestowing Gillyweed. If you are scratching your head, trying to wrap your mind around just what counts as a "unique ability" or "odd behaviour," I have included a more detailed explanation at the end of the lesson.

With these distinctions in mind, plants like the Chinese Chomping Cabbage which is known to have a nasty bite - are magical, whereas roses, while incredibly useful, are non-magical. Remember, non-magical does not mean ineffective. In fact, nearly all plants have some handy properties. Many of these non-magical plants can actually be utilized by Muggles to heal various ailments. It is for this reason that some less open-minded witches and wizards are skeptical of herbology. If we are studying the same plants that Muggles use, they think to themselves, 'perhaps herbology is no different than that overly complicated eckeltricity, and is a poorly disguised magical substitute.' However, I hope you know this is not the case. While it is true that Muggles can utilize the properties of non-magical plants, they are not able to tap into the herbs' true potential. When witches and wizards use non-magical plants, particularly in potions,

their properties are enhanced far beyond Muggles' comprehension. To be clearer, a Muggle can use a plant for its base properties when brewing it in a tea or other non-magical herbal remedies. However, when a wizard uses a plant in a magical situation, such as brewing a potion, the magic of the process interacts with the plant's properties and unifies them with the magic of the potion. This means that whatever the plant's base properties are, the effects will be more pronounced, and may occasionally react to other magical ingredients in ways that the plant would not normally do otherwise.



There is one thing that magical plants possess (or can possess) that no non-magical plant can, however. Sentience. This is a bit of a thorny issue both inside herbological circles and in the academic wizarding world at large, but there is certainly evidence to suggest that at least some magical plants are sentient, or able to perceive the world around them and act in response. Now, don't be thinking that your Mimbulus Mimbletonia is able to engage in philosophical debate with the Flitterbloom you have it next to! However, there is no denying that some magical plants seem a little too savvy or aware of their surroundings to be natural. We have trees that punch, vines that bite and snap, and many plants that almost seem to have personal preferences or personalities, like the mandrake. Skeptics of this theory try to attribute these quirks to complex root systems or hairs allowing the plants to sense a nearby presence and react alongside our tendency to projection of human characteristics onto things. For example, the touch-me-not plant does not shrivel up because it is afraid or repulsed, as would be the case if a human reacted in this manner. This is simply an inherent defense mechanism for the plant that is triggered by certain events. It is not a choice or mental reaction in any way, though it may appear to us to seem that way.

In any case, it is certainly hard to be sure. Indeed, magic has not advanced far enough for herbologists to be able to tell if plants are in any way aware of their own existence, or can feel anything at all, but in some cases it does seem that way. I hear Professor Fairclough has a serviceable explanation of how that might work – something about nests, if I remember correctly – but I never did take Ghoul Studies. Whatever the case, when dealing with magical plants that seem to be thinking and feeling, it's safer to assume they can, and plan for it, rather than be taken by surprise!

Before we leave the topic of the differences between magical and non-magical plants, we have one more thing to discuss.

Non-magical plants are less reactive in potions, and therefore much less temperamental and more predictable. This is cause for many potioneers and healers to

utilize them frequently, because the addition of non-magical plants does not tend to cause explosions, major heat changes, or other, sometimes disastrous mishaps which can occur during brewing. While magical plants are obviously necessary to create some potions' effects, when a non-magical plant can be used, this alternative is usually safer.

Let Me Count the Ways

Now that we have those distinctions out of the way, I would like to look at a prime example of the usefulness of non-magical plants: the rose. This herb is classified as a shrub which can grow anywhere between one and twenty feet in height. However, as a shrub, width is also an important factor to consider. When planting, you will need to account for a potential growth of two to four feet in any direction, though specifics depend on the variety you obtain. Roses have a plethora of varieties, coming in many different natural colors, unique scents, and levels of magical interactivity (or ability to work well with magic). In fact, there are so many varieties, hybrids, and sub-species of roses that many strains are referred to by common names and general sub-genera rather than creating full scientific names for each new version. Despite the fact that it makes a mess of naming conventions, the diversity of the rose contributes to their array of uses in medicine.



The properties of the rose were first uncovered – as far as we know – in the first century B.C.E. by a naturalist and philosopher named Pliny the Elder. Due to the mixing of knowledge between Muggles and magical folk, it is unknown whether or not this man was Muggle, Squib, or magical, but what is known is that he discovered 32 medicinal uses for roses. Over the many years since then, the number of uses has grown until the current total of forty was reached. The properties of roses are

utilized both in potions and through the ingestion or application of the rose (in all its various parts) itself.



For example, roses are used in a number of potions or general herbal preparations (essentially non-magical potions, which we will learn more about in Year Three) that deal with coughing, wheezing, the common cold, fevers, and the flu. While not an ingredient in the standard Pepperup Potion, many older and more traditional witches and wizards who make their own home remedies make use of the rose for related potions. Additionally, it can be used to regulate many different body functions such as constipation, diarrhea, kidney function, stomach function, and menstrual problems. Obviously, many of those things are highly unrelated or even opposites of each other, but it's important to keep in mind that the properties of the plant can change (or specific uses can be emphasized) depending on how the plant is prepared, what part of the plant is used, and what other ingredients are used in conjunction with it.

For quick reference, I have compiled a list below of the most pertinent of the aforementioned forty uses. I know, I know. It's not the entire forty. However, when listing them out, you'll find they get slightly repetitive. For example, one use is that it is an excellent source of vitamin C, whereas another use is the prevention of scurvy, which is directly caused by the large amounts of vitamin C. Therefore, for simplicity's sake the following list is just a condensed version of the aforementioned forty uses, listing thirty aliments or issues that can be healed or aided with the plant's properties.

1. Eye Diseases
2. Cataracts
3. Burns
4. Influenza
5. Stomach problems
6. Diarrhea
7. Chronic finger sores
8. Snow blindness
9. Sore throats
10. Nosebleeds
11. Kidney stones
12. Headaches
13. Coughing
14. Colds
15. Dry skin
16. Grief
17. Stress and anxiety
18. Scurvy
19. Fevers
20. Puffy skin
21. Blood thinning
22. Acne
23. Muscle pain
24. Depression
25. Menstrual issues
26. Inflammation
27. Constipation
28. Colic
29. Insomnia
30. Viral and bacterial infections

That's quite the laundry list, I know! Let it not be said that non-magical plants have no use in the magical world! Now, if these properties of the rose have you chomping at

the bit to get started growing your own, you're in luck! I have a few cultivated shrubs that I am willing to give out to any interested herbologist among you that would like to start tending and growing plants outside of class. Just come speak with me after the lecture. However, you will need to know how to take care of it!

There Grows a Rose

The wild rose or *Rosa carolina*, one of the most common varieties, grows in partial to full sunlight. Make sure to plant your rose shrub in neutral to mildly acidic soil– more specifically, any soil with a pH balance of 5.5 to 7.0. When you receive your rose shrub, it will look like nothing more than a pile of sticks, but don't worry, that is because it is in a dormant state. Once it is planted and receives enough nutrients, it will be begin to grow. Dragon dung should be used to introduce nutrients into the soil and encourage the shrub to come out of its dormant state. This will also help the rose interact with magic more intensely later. Rose plants need lots of water, but do not drown them; let the water sink into the soil and be absorbed completely before adding more! Furthermore, when watering, do not water it a little bit every day, but give it a lot of water occasionally so the deeper roots are reached and the plant's foundation is strengthened. Because you will be dumping large amounts of water on the plant, make sure the water can drain - a pot with a drainage hole is ideal for this. Lastly, don't forget to wear your dragonhide gloves while tending to roses to protect yourself from thorns!

Closing

There are plenty of other non-magical plants that witches and wizards use on a daily basis; the rose is just the tip of the iceberg. We will be going over many more in your years as a herbologist. In fact, most of the plants we will go over this year will be of the non-magical variety because of their inability to bite you, strangle you, or unexpectedly combust if you touch them wrong.

Before we leave, I should remind you that your midterm is coming up after the next lesson. Can you believe how fast time is flying? If you have any questions about this, please contact me. I will be glad to clear up any of your doubts!

Definitions

Odd behaviour: When identifying magical plants, "odd" behaviour can include unnatural movement, an unnatural growth rate, a strange diet, or actions that imply sentience.

Unique abilities: When identifying magical plants, unique abilities can be split into two groups. The first includes abilities plants may bestow upon humans that they do not naturally possess, such as breathing underwater, becoming invisible, or becoming incredibly lucky. The second group concerns the abilities a plant demonstrates on its own, such as the ability to defy gravity, growing like a normal plant while not being made of natural plant materials, being able to pollinate or reproduce in strange ways, suddenly catching fire, or mimicking speech, just to name a few.

Lesson 5:
Basic Blooms Part I



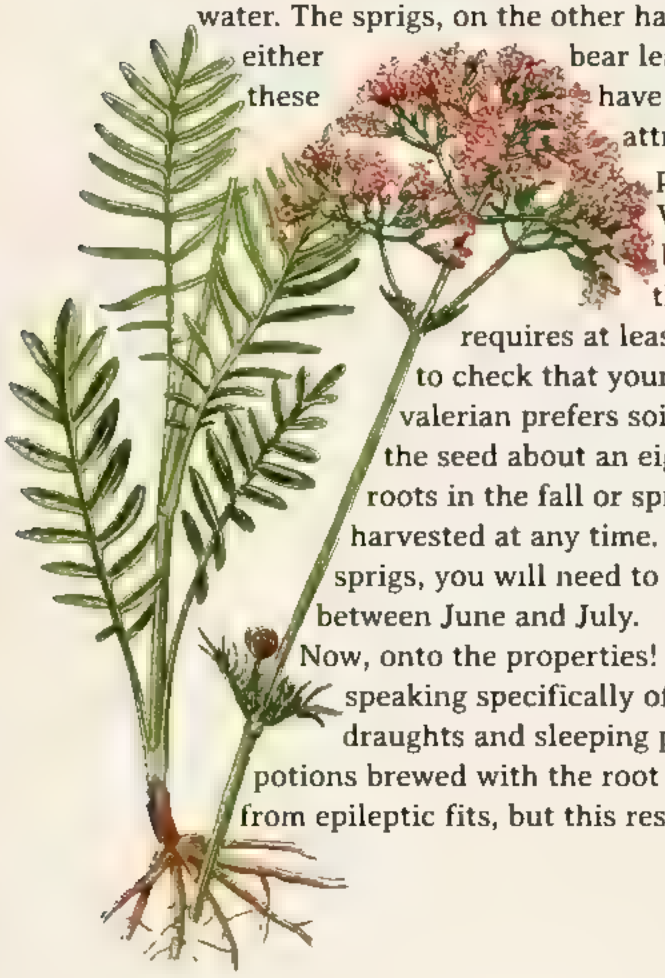
Ipomœa Ficifolia

Introduction

Welcome back, students! If you were tired of all the general theory in the beginning of the year, prepare for things to get very practical and specific! We're going to be going over four different plants today, and touch on some parts of their history and usage. Unlike last lesson where we talked about roses, we won't include the entire laundry list of each plant's properties, though we will note the most useful and common ones. We will also talk about planting specifications and tips for growing or harvesting them! You'll notice that all of the plants we're covering today are non-magical plants, despite the fact that they are relatively common ingredients in potions. The other thing these plants have in common is that they should be simple enough for any aspiring herbologist to grow.

Roots and Shoots (Valerian)

Valeriana officinalis is a plant native to Europe and parts of Asia, although it has been introduced to North America as well over time. Like other non-magical plants, Muggles are aware of its existence, though unaware of its full powers. Both the roots and the sprigs of this plant can be used. The roots, as you likely know, are the part of the plant that grows underground and keeps the plant anchored as well as supplies the plant with water. The sprigs, on the other hand, grow above ground and are the part that either bear leaves or flowers. Interestingly, in this case, each of these have different magical and non-magical properties attributed to them, so we will discuss those properties separately!



Valerian can grow to be five feet tall and forms bunches of attractive white flowers. This plant thrives in the sun and, in best-case scenarios, requires at least seven hours of sunlight. When planting, be sure to check that your soil is in the correct pH range for this plant, as valerian prefers soil that is quite acidic, between 4.5 and 5, and bury the seed about an eighth of an inch down. It is best to harvest the roots in the fall or spring. The sprigs, on the other hand, can be harvested at any time. Though, if you desire or require flowers on those sprigs, you will need to wait until the summertime, as these plants bloom between June and July.

Now, onto the properties! Valerian possesses sedative powers, and, when speaking specifically of the root, it is very effective in in calming draughts and sleeping potions. There is also evidence to suggest that potions brewed with the root have some beneficial effect on those suffering from epileptic fits, but this research is still in its beginning stages. Its sprigs, in a

similar manner, are used in several sleeping potions. Interestingly enough, this plant will attract cats and drive them into a frenzy, just as with catnip. However, dogs can be repelled with it, particularly when it is made into an essential oil or brewed in a potion. There also exists a Mediterranean plant that goes by the common name "red valerian," but it is not part of the same genus and does not share very many of the same properties or uses.

In terms of non-magical properties, there is some overlap in that the roots are used on their own to promote sleep and help treat epilepsy in non-magical preparations. Valerian also serves to aid in issues like heart palpitations and poor eyesight.

A Lily by any Other Name

The lovely lily plant comes in nearly as wide a variety as roses, which we discussed last week. They come in an array of colors ranging anywhere from blue and purple to white and yellow and can be one of many different shapes. However, some of you may have a mental image of lilies that is not entirely correct. True lilies come from the genus (or scientific classification) of *Lilium*, and grow from bulbs, despite the fact that many other plants are called lilies, though don't fit this category. Of course, that may not mean much to the average First Year and beginning plant enthusiast. Suffice it to say that many groups of plants that have the word "lily" in their common titles are not lilies. This includes plants like daylilies, water lilies, peace lilies, and lilies of the valley.



With this in mind, true lilies grow all over Europe and Asia, and in the northern parts of North America. They can grow anywhere between two and six feet tall. When planting, make sure that you have placed the flower in an area where it will be able to receive between five and six hours of sunlight, and with soil that has a ideally pH balance between 5.5 and 6.5, though there is a little wiggle room outside of these margins that you can work with. You can plant the bulbs around four to eight inches below the ground. Water whenever you see that the soil is dry – this is usually every three days if they are in a greenhouse away from the elements. Something else important to note is that when the season turns towards winter, and the leaves of the lily die

off and wilt, make sure to let them finish the process and fall off naturally, rather than prune them. This allows the lily bulbs to prepare for their dormant stage throughout the winter.

While it may seem odd for such a pretty plant, lilies are actually best known for their poisonous uses. The degree to which their poison is effective differs between the hundred or so varieties, but that is a topic better discussed in Potions class. For now, just know that you shouldn't be eating any. These plants are also highly poisonous to cats and Kneazles, so be wary of where your pets are wandering.

Despite their grimmer uses, some lilies can be used in conjunction with other ingredients to regulate heart rate and some roots can be made into a paste to treat burns. Finally, there are some potions which use small amounts of lilies in order to improve the scent of the concoction. An interesting fact to note overall is that lilies appear to react extraordinarily well with magic, and can even be stimulated to faster or even more luscious growth via magic. Ah, I saw your ears perk up at that! No, there is no spell that can completely substitute good, old-fashioned elbow grease and care, but there are an assortment of spells that can help, one of which we will discuss at the end of this lesson.

Accommodating Asphodel

Actually a relative of the lily, asphodel is native to the Mediterranean but easily grown in greenhouses under the supervision of a herbologist. *Asphodelus aestivus*, or summer asphodel, is the species we will be primarily concerning ourselves with today, though there are a few others of lesser uses in magical circles. The plant grows between one and five feet on average and is very common in the wild of its native area.



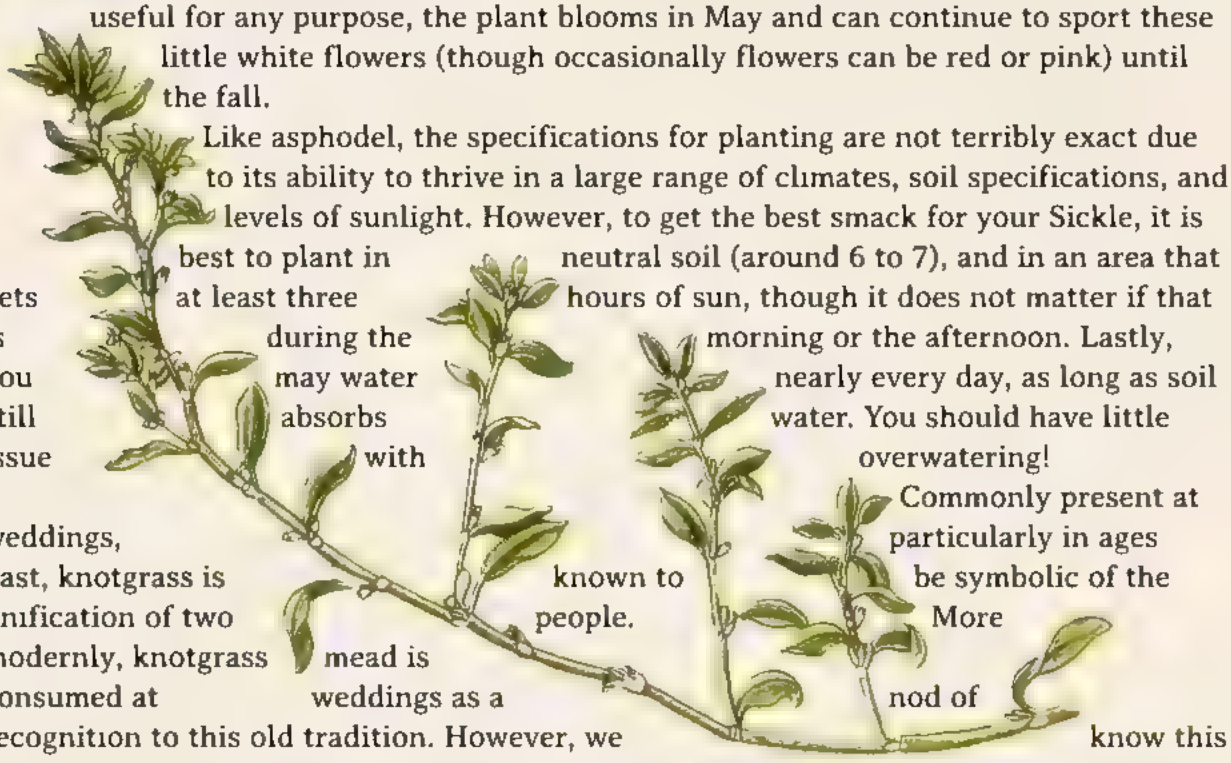
For ideal growth, be sure to plant the seeds in an area where they get at least partial sun - although note that contrary to the usual distinction for partial sun (which we will talk about in Lesson Eight), it does not matter when the hours of sunlight occur – and in roughly neutral soil. A pH balance of 6 to 6.5 is preferable, but due to the alkalinity of Mediterranean soil in some areas, a higher level is likely fine! Because it grows so commonly on its own in the wild, this plant is rather easy to grow as long as you do not overwater it. Make sure your plant has soil that can drain (like a pot with a hole in the bottom) and water only when the soil is visibly dry.

The uses of asphodel largely center around the roots of the plant, not the flower. It is used in potions to make a Sticking Solution that rivals the Sticking Charm, Astrictus, and is also used in strong sleeping potions such as the Draught of the Living Death. In addition to these traditional uses, Ocamier Flinson, a renowned herboogist in the wizarding community, has discovered many others, though few have undergone enough testing and replication to be widespread. Those that have become widely accepted include the use in

controversial skin-lightening potions and in potions to aid regrowing skin, though only the first shoots of the plant should be harvested for this purpose.

Tying it all Together (Knotgrass)

Also known as cowgrass, hogweed, and many other names, *Polygonum aviculare* is a common weed found all over the globe. Like many weeds, it will grow nearly as much as allowed; in prime conditions it can grow up to six feet or be just a few inches tall if the area is more inhospitable. While the flowers of this weed are not presently known to be useful for any purpose, the plant blooms in May and can continue to sport these little white flowers (though occasionally flowers can be red or pink) until the fall.



Like asphodel, the specifications for planting are not terribly exact due to its ability to thrive in a large range of climates, soil specifications, and levels of sunlight. However, to get the best smack for your Sickle, it is best to plant in neutral soil (around 6 to 7), and in an area that gets at least three hours of sun, though it does not matter if that is during the morning or the afternoon. Lastly, you may water nearly every day, as long as soil still absorbs water. You should have little issue with overwatering!

Commonly present at weddings, particularly in ages past, knotgrass is known to be symbolic of the unification of two people. More modernly, knotgrass mead is consumed at weddings as a nod of recognition to this old tradition. However, we know this symbolism has more literal roots. Knotgrass is a key ingredient in Polyjuice Potion, which allows a person to temporarily take the form of another. Apart from its more illicit uses, knotgrass is used in Shortening Solutions and potions that de-age. Interestingly, it was used in olden days in some love and fertility potions, though more potent substitutes have been found since.

Helpful Hocus Pocus

Now for the spell I told you about earlier. The Growth-Starting Charm was developed by Calla Evora in the early 1900s. This Brazilian housewitch was attempting to enter a plant-growing contest with far too little time to prepare. Still, she would have rather eaten a bowl of Flobberworm mucus than let her rival and

next-door-neighbor, Delfina Narciso, win for the sixth year running. Unfortunately, her amaryllis were never going to beat her opponent's prize winning corsage orchids without a little help, as bugs had ravaged her first crop and her second attempt had barely budded yet. She didn't want them blooming overnight, as that would be far too obvious and would result in disqualification. So it was then that this charm was born!

This spell may be a bit beyond you at the moment, but with some practice you will be able to get some results from it. It is weaker than its cousin, the Herbivicus Charm, and its effects are not instantaneous (or even close), but is much simpler and gentler on plants and causes a small "boost" in growth. However, do be warned that if you put too much willpower into the spell you can easily exhaust your plant, causing it to bloom quickly, wither, and die shortly after. It is best to use this spell sparingly, either when time is short, or as a last-ditch attempt for plants that will surely die anyway if additional measures are not taken. After casting this spell, be sure to adjust your care for the plant accordingly. Because the spell accelerates their growth, they may need more frequent pruning, watering, and/or application of dragon dung (or other compost) in the following week or two.

This spell often works best on plants that grow from bulbs, due to the fact that they store up a large amount of resources and can handle a sudden growth spurt a bit better. However, there are also some plants that just react with magic in general (this spell included) particularly well. The spell's details are as follows:

The Growth-Starting Charm

Incantation: Virenesco

Pronunciation: VEER-en-es-co

Wand Movement: Whirlpool motion, then flick to pull up

Willpower: Low

Concentration: Low

Closing

That is all the time we have for today, my eager young herbologists! This list of plants hasn't even scratched the surface of all the wonderful herbs I have to share with you, so be prepared to discuss some more next week. Good luck with your midterm and make sure to grab your homework on the way out.

Definitions
Sprig: A portion of a plant that can include the stem, the leaves, and/or the flowers.

Lesson 6:
Basic Blooms Part II



Fritillaria pudica

Introduction

Hello again, students! Welcome back to the herbology greenhouses. I see you've been busy in your individual plots since we last met. I have to say I'm quite impressed with your initiative and the fact that some of you seem to be using the Growth Kick-Starting Charm to excellent effect. Just be sure to tend any accelerated plants very carefully! Our topics for today are essentially a continuation of last week's lesson. We will be covering four more plants that are easy to grow and also quite useful for the average witch or wizard. Take a seat and get comfortable!

Silverweed

A quickly propagating herb, this well-named plant certainly spreads like a weed. It grows easily in most parts of the world, particularly temperate areas. *Potentilla anserina*, also called *Argentina anserina*, is green on the top and silvery on the underside of the leaves, due to the very fine whitish hairs that grow there, hence the plant's name. Starting in the early summer, each plant will produce a single, yellow flower that grows on a stalk.ss

As with many of the basic plants we have covered, silverweed is not terribly picky and will grow well with little encouragement. However, for best results, plant in soil that is very mildly alkaline, or just a bit over 7 on the pH scale. The amount of sun does not impact this plant's growth much just so long as you do not plant it in full shade. It will grow much more quickly with more sunlight. You can water this plant frequently and do not need to worry much about overwatering! When harvesting, be sure to wait to gather the herb when the weather is dry; a rainy day or a dewy morning will coat the leaves with additional moisture which will impede the drying process.



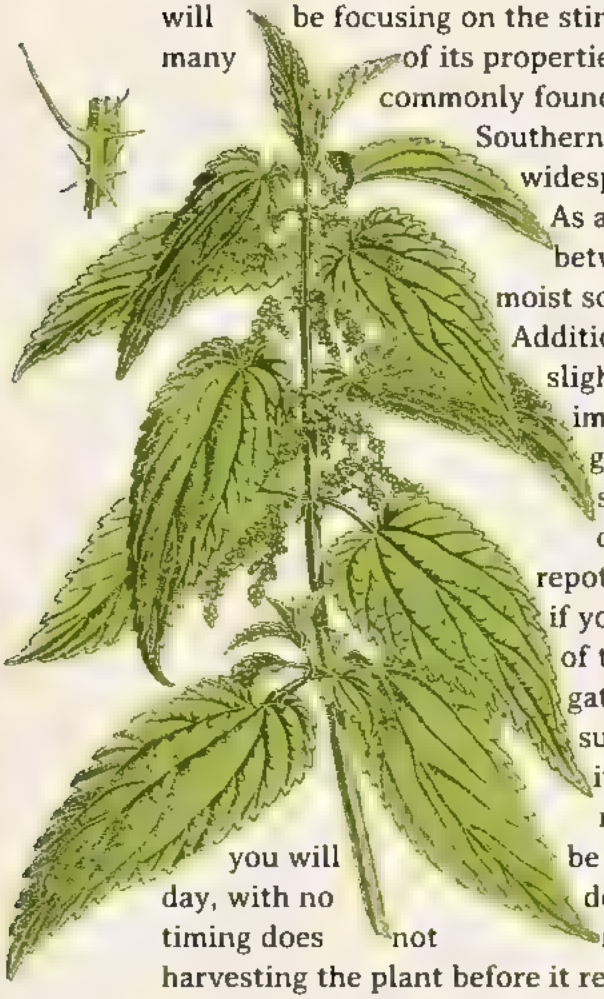
To properly dry a plant, both Muggles and magical folk alike prepare their plants by hand, gathering and hanging in dry, often heated areas. However, owing to our magical nature, we have a few additional tricks up our sleeves! We will discuss a drying charm at the end of the lesson, as it is quite handy if you do not have the space or the time to dry an herb normally. However, non-magical methods are just as effective and are perfect substitutes if you are unable to perform it for any reason..

Contrary to the folk legend that this hairy, silver plant can ward off witches, it is commonly used in potions. It is only used in its dried form and is often ground up into a powder. The herb can be used to great effect in both Sore-Removing Serums and

potions to ease various cramps. Until very recently, there had been no recorded use for the seasonal yellow flowers that appear in the summer. However, some current research shows a possibility that these blooms could be used in blemish-removing potions, but said research is currently stalled as they has the unfortunate side effect of fusing all one's teeth together. Finally, while not a particularly magical use, this plant is edible and is often a staple in the diets of grazing livestock of all kinds.

Nettle

Yet another weed to add to our list. Let no one say that weeds do not have their uses! This is another hairy plant, though you will not find these hairs very appealing.. The leaves and stem of the leafy green nettle are covered in tiny, stinging hairs that pack quite a nasty punch for their small size. While some variations of nettles are hairless, we will be focusing on the stinging varieties today, as they are what give the plant many of its properties and combine well with magic. This plant is most commonly found in Northern Europe and Asia, though is also present in Southern Europe, South Africa, and Australia, despite being less widespread.



As a weed, *Urtica dioica* grows voraciously and can reach between three and seven feet in height. It much prefers moist soil, so watering frequently will give you the best results. Additionally, while the nettle will do well in neutral soil, slightly alkaline soil (ranging between roughly 7.1 to 7.8) will improve the plant's ultimate height, health, and rate of growth. For sun, anything between full sun and partial shade should be adequate. Remember to wear your dragonhide gloves when tending, watering, potting, repotting, and the like! You won't enjoy the stinging sensation if you forget. Interestingly, the freshness of the plant is one of the factors that determines its uses and properties. If gathering nettle to be dried, it is best to do so in the early summer (between May and June) before the plant puts out its flowers (whose appearance vary by subspecies of nettle). As mentioned when speaking of silverweed, if you will be drying nettles, make sure to gather the plants on a dry day, with no dew on them. If gathering the herb for fresh uses, the timing does not matter too much, though there are those that swear by harvesting the plant before it reaches a foot in height.

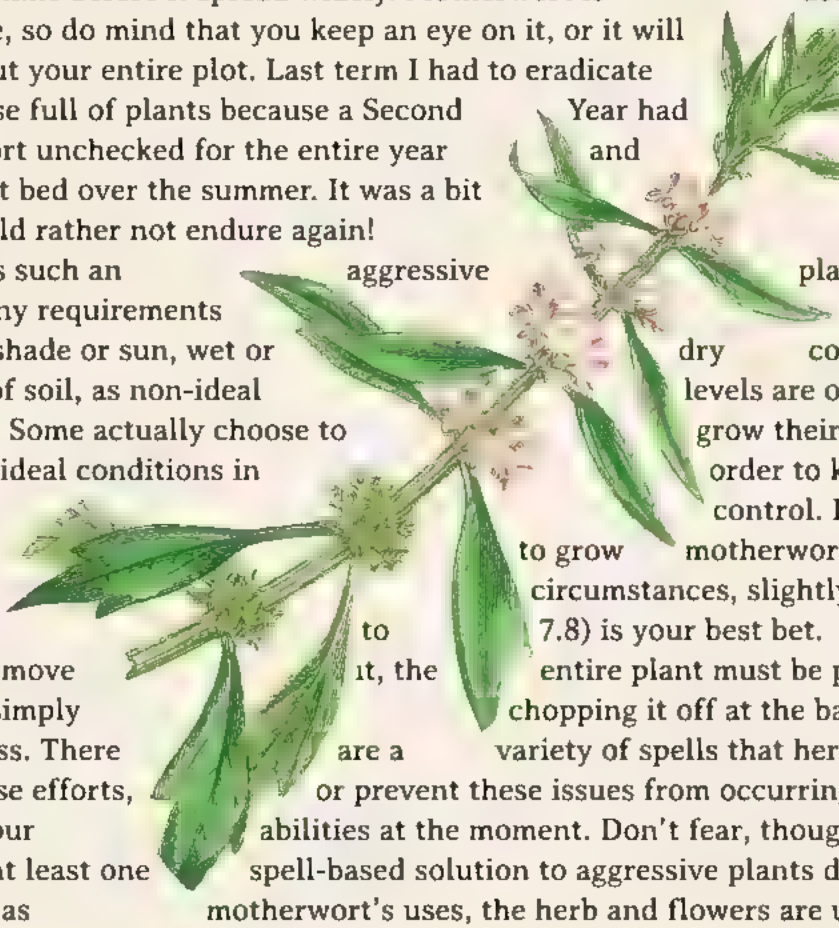
Magic acts particularly well with nettles, though the results and properties that come from this plant vary widely. The plant itself is used most frequently in potions, though occasionally its vivid yellow roots are utilized as well. Fresh nettles are used as an ingredient in the Cure for Boils, whereas dried nettles are used in the Herbicide Potion. Other uses of the leaf and stem of the nettle include various nettle-based beverages, such as wine and tea (I myself am partial to a good nettle tea), have properties that aid

respiratory function and are used in hair tonics. The flowers are also collected, but not very widely used, as they are not as potent. Some herbologists, apothecaries, or potioneers prefer them for situations where they want a milder mixture. The roots find use in the rather obscure Curdling Concoction, though occasionally a daring herbologist or potioneer will attempt to use this part as a substitute in other mixture for the leafy part of the plant.

Before we wrap up our nettle discussion, it bears mentioning that this plant has been used historically for healing uses including the Anglo-Saxon Nine Herbs Charm (actually a potion recipe that was paired with a spoken incantation for maximum efficacy). It was recorded in the 10th century as part of the Lacnunga Manuscript and intended to treat and prevent poisonings and infection. It was also used amongst ancient peoples to prevent baldness, though other herbs and ingredients have become more popular for this use since.

Motherwort

Leonurus cardiaca, a relative of the mint family, is yet another weed with useful properties we need to discuss. It usually reaches between two and three feet when fully grown and has hardy root networks. Unlike nettles, this plant is native to the southerly regions of Europe and Asia. It was also introduced to North America, and it was only a matter of time before it spread widely. Motherwort is actually quite aggressive, so do mind that you keep an eye on it, or it will spread throughout your entire plot. Last term I had to eradicate half a greenhouse full of plants because a Second Year had left their motherwort unchecked for the entire year and not cleaned out their plant bed over the summer. It was a bit of a disaster and one I would rather not endure again!



As it is such an aggressive plant, there really aren't many requirements for growing it. It is happy in shade or sun, wet or dry conditions, and any pH level of soil, as non-ideal levels are only a mild deterrent. Some actually choose to grow their motherwort in less-than-ideal conditions in order to keep its growth under control. However, should you wish to grow motherwort in perfect circumstances, slightly alkaline soil (from 7.4 to 7.8) is your best bet. Should you ever need to remove it, the entire plant must be pulled up by the roots, as simply chopping it off at the base will only delay its progress. There are a variety of spells that herbologists can use to aid these efforts, or prevent these issues from occurring, but they are well beyond your abilities at the moment. Don't fear, though. We will be covering at least one spell-based solution to aggressive plants during Year Two!

As far as motherwort's uses, the herb and flowers are used in potions to

aid with and spur childbirth, and is safe to use in the late stages of pregnancy as well as during breastfeeding. For this reason, its overlapping uses were a wonderful discovery, as often times pregnant and nursing women are limited in what potions they can safely take. With this in mind, it has some uses as a substitute in potions for heart-related issues stemming from anxiety and heart disease. It also has use in dubiously antiquated and complex (though proven effective) remedies for hydrophobia, also known as rabies. The roots have no purported uses.

Fluxweed



Our last plant of the day is fluxweed. Also called flixweed or tansy mustard, this plant is in fact a member of the mustard family. The annual's green stems are topped with yellow flowers in the summer, specifically July and August. Originally, this plant was native to Western Asia, but spread across that landmass to the rest of Asia and parts of Europe. It can be cultivated in greenhouses worldwide. *Descurania sophia* grows roughly between ten and thirty inches tall and prefers full sun. Don't water too frequently, as this plant likes dry conditions; wait until the soil is completely dry to the touch to water. As long as the soil is arable – meaning it has a pH that is suitable for plant growth in general, which is between 4.5 and 9 – this plant should do just fine. There are no specific pH requirements.

Its properties range widely, aiding in everything from transformations, such as in the dreadfully complex Polyjuice Potion, to potions for dysentery or, more commonly, diarrhea. Transformation is thought to be the primary use, while its other uses are more secondary. If the whole plant is used in a potion, it is typically used fresh for higher potency, though there is something to be said for the use of its dried flowers in completely separate preparations than those mentioned above, such as Bottled Butterflies in the Stomach. Its seeds can also be used, dried or raw, in the Thirst-Quenching Quaff.

Magic Moisture Removal

Magic, you wonderful tool! Many of the plants covered today require drying to tap into particular properties. If we were Muggles, there would be specific procedures and considerations for hand-drying each plant, and in some cases, we would have to wait an exceptionally long time for plants to be completely dry. However, as we are blessed with the powers of magic, we can have some instant gratification! The Dehumidifying Spell - not to be confused with the Quick Drying Charm you'll learn in your Third Year of Charms class – will completely remove moisture from the air in the area you cast on. At your level, there are few safety concerns surrounding casting this on a large area, since you do not have the willpower sufficient to accidentally sap entire rooms of moisture and cause adverse effects on your classmates and yourself. However, this is something to be wary of in the future.

Many herbologists have entire rooms or outdoor sheds devoted to this purpose, but as First Years, you will likely have to start with small wooden boxes, or other containers that will not allow water to get in. Simply place the herb you wish to dry inside, make sure the container is sealed and cast the spell. The wand movement is just a tap on the container, whether that be an entire shed or a small box. The larger the container, the more willpower required, so keep in mind that it may behoove you to do one stalk of a plant at a time if that is all that fits inside your particular container. For large quantities and larger spaces, it may take the spell a few hours to nearly a day to take effect, but small areas are affected almost instantaneously. The spell's details are below!

The Dehumidifying Spell

Incantation: Arfacua

Pronunciation: AR-fah-COO-ah

Wand Movement: Tap on the object

Willpower: Low to high
(depending on the size of container)

Concentration: Low

Closing

That rounds up our discussion of basic plants for today, and in fact, for the whole year. Next week we will be looking at the classification system for plants that pose certain threats or have potential complications to consider when handling, harvesting, planting, or using in potions. Stay tuned and don't forget to grab your homework on the way out!

Lesson 7:
Hazardous Herbs



Bubotuber vulgaris

Introduction

Hello again, First Years! Ah, I see some eager looks on your faces. Yes, if you recall, today we will be discussing some of the more dangerous considerations herbologists face when working with plants. Though I hate to disappoint, we will not be directly working with any of the plants mentioned or discussing their planting, harvesting, or general care. These plants are far too advanced for you at this moment. Think of this as a sneak peek into the world of dangerous plants we will be studying later.

This lesson is just to make you aware of what the W.H.I.P.S. classes (and their subclasses) are. Confused? Let me explain!

Dangers of Plants

There are several different types of hazards that can stem from plants. Over time, these hazards have come to be uniformly classified and identified for easier communication between witches and wizards of different backgrounds and ability levels. This class system is known as the Wizarding Herbs with Irritating or Perilous Specialties, or W.H.I.P.S. for short. The purpose of the W.H.I.P.S. classes is to give wizards a standardized way to communicate about hazardous magical plants, what to expect from these kinds of plants, as well as clear guidelines from the Ministry of Magic as to laws about such plants. To be clear, other than Class C, this system of classification does not apply to non-magical plants.

Today I am going to discuss with you the different types of hazards and the safety requirements for dealing with those hazards. The Ministry requires everyone who may be working with plants to be educated in the W.H.I.P.S. classes, so please pay close attention to this lesson material. I ask this for the safety of you, your classmates, and anyone you may work or travel with in the future! A key way to not getting taken by surprise by any of these plants is not working on them alone, after all. Though keeping your wand on you at all times is a close second.

There are six official classes of dangerous plants, and it is important to remember that some plants may fall under more than one class. Each class can have different levels of potency or danger, and have a variety of effects, though I will do my best to explain all plants that fall within that range. However, keep in mind that as with nearly all magical fields, there may be more undiscovered abilities that magical plants have which have not yet been documented! While these classes are reasonably exhaustive at the

moment, things may change. The Ministry of Magic is currently debating adding a seventh class, but I will not confuse you with the details about this hypothetical classification in this lesson so as to avoid overloading you. After all, we're just starting out!

Class A: Odorous

At their core, plants in the odorous class can affect people, animals, or even other plants by releasing odors in the form of a powder or gas. When working with these plants one should wear a mask, use a Bubble-Head Charm, or take other similar precautions. Masks should be reinforced with strengthening charms and have filtering charms applied. Plants with the odorous classification can have different abilities and can fall into into three subclasses, called level one, two, and three.

Level One

Level one is the most severe and indicates a plant that puts you in immediate danger of death. Quite perilous for our first look at these classifications, no? I told you these were no laughing matter! More specifics about this class include that the powder or gas will cause difficulty breathing, and will lead to asphyxiation and death in minutes. The pollen of the potent Hagweed has this unfortunate side-effect when the plant is pollinating, so it's not necessarily something that has to be year-round. Strangely, mandrakes have also been put into this class, though their threat is neither a gas nor a powder. This has a bit to do with the potential seventh class I mentioned.

Level Two

Plants from this subclass are slightly less dangerous, but can still cause death over a long period of exposure, or over repeated encounters if not treated each time. This danger is in the form of poison and other elements whether inhaled as a gas or powder. Essentially, the odors or spores of these plants can irritate the the respiratory system (or other important systems) and upset the balance of the human body. Additionally, they may find a way under the skin or into your eyes. *Cornus impuritas*, otherwise known by the common name Smogwood, is an example of a plant that fits in this class. This hybrid was magically enchanted and crossbred to absorb pollutants in the air. An unfortunate limitation comes in the fact that not all the pollution can be permanently stored in the Smogwood tree, and some small amounts of smog, dust, and generally toxic substances are constantly being exuded from the plant. After spending many hours unprotected in a greenhouse that contains Smogwood, you will likely begin to feel ill, though adverse effects will seem to dissipate once you remove yourself from the situation. Don't be fooled though! When you feel ill after working with plants, be sure to seek medical

attention right away, as permanent damage could be occurring even if your symptoms disappear.

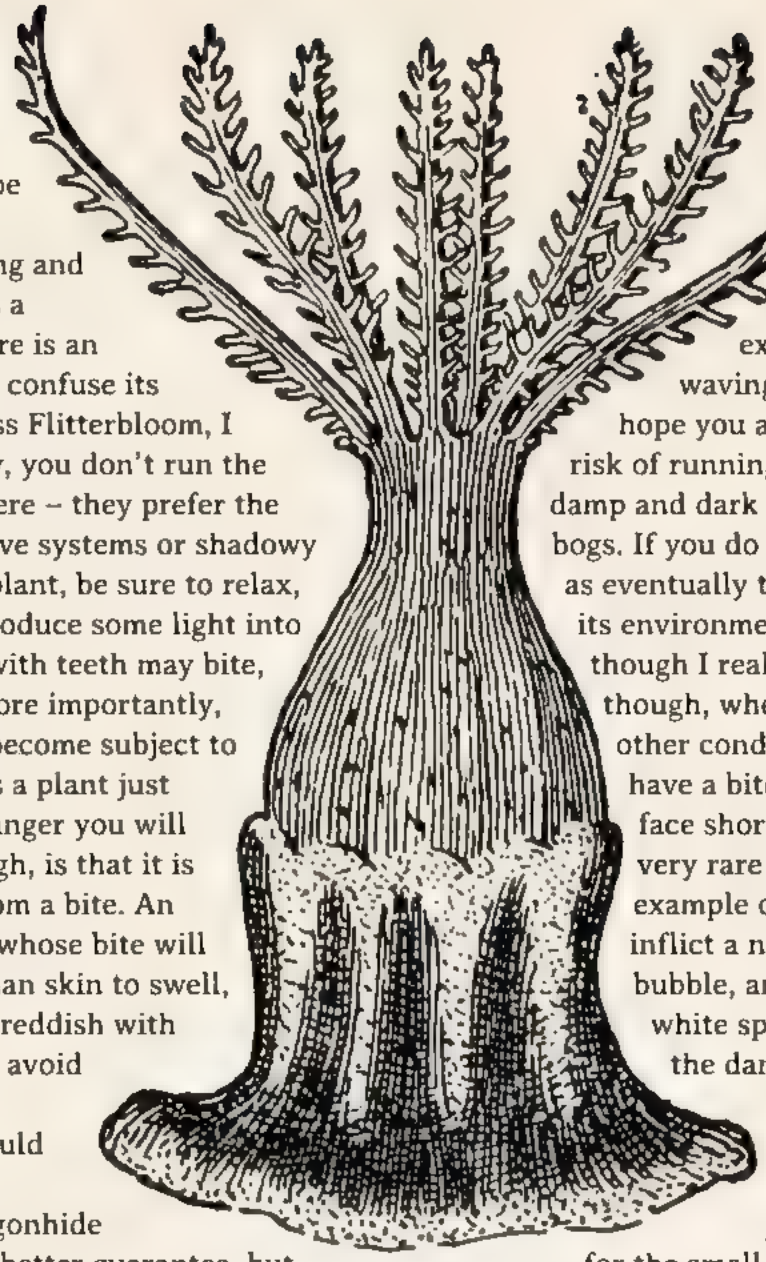
Level Three

Finally we have the mildest class of odorous plants! There are three separate possible issues a level three odorous plant may present. In the first case – paralysis – persons will lose the ability to protect themselves once affected by the plant. While paralysis in and of itself is not inherently a threat, it may leave the victim open to other attacks. This paralysis may be partial, only affecting movement in the arms and legs, or it may affect one's full body. Antidotes should always be kept on hand for a partner to apply; paralysis is more curable than the conditions one will receive if the plant should follow up with another attack! Additionally, some plants can just cause disorientation or confusion. While like paralysis in that it is not an issue in and of itself, this disorientation can still lead to potentially disastrous or deadly mistakes. Finally, plants in this level can also cause the person who is in contact with the powder or gas to fall into a deep sleep, potentially leaving them open to danger. This is a lot of ground to cover, but one plant that falls into this wide range of herbs is the spider flower. Not to be confused with their non-magical cousins, a true spider flower will instantly cause paralysis upon the inhalation of its pollen. The duration and intensity of the paralysis can vary according to the affected's weight and previous exposure, but make sure you have someone watching your back to avoid what may happen next!



Class B: Physically Aggressive

This class includes plants which may intentionally cause damage when feeling threatened or to obtain food. These plants are usually easy enough for a well-educated wizard to handle, so it is crucial we make you aware of them so you can be better prepared! Again, there is a wide variety of abilities that can fall into this class, including strangulation, biting, cutting, and general pummeling. Many flesh-eating plants fall into this class, though not all.



The ability to strangle is usually found in magical vine-like plants and can either be used as a self defence mechanism, or for capturing and consuming prey, if it is a carnivorous plant. Devil's Snare is an example of the latter. Should you confuse its waving tendrils with that of the harmless Flitterbloom, I hope you are prepared! Fortunately, you don't run the risk of running into Devil's Snare just anywhere – they prefer the damp and dark and are usually only found in cave systems or shadowy bogs. If you do end up tangling with this nasty plant, be sure to relax, as eventually the plant will release you, or introduce some light into its environment, as it will shrivel.

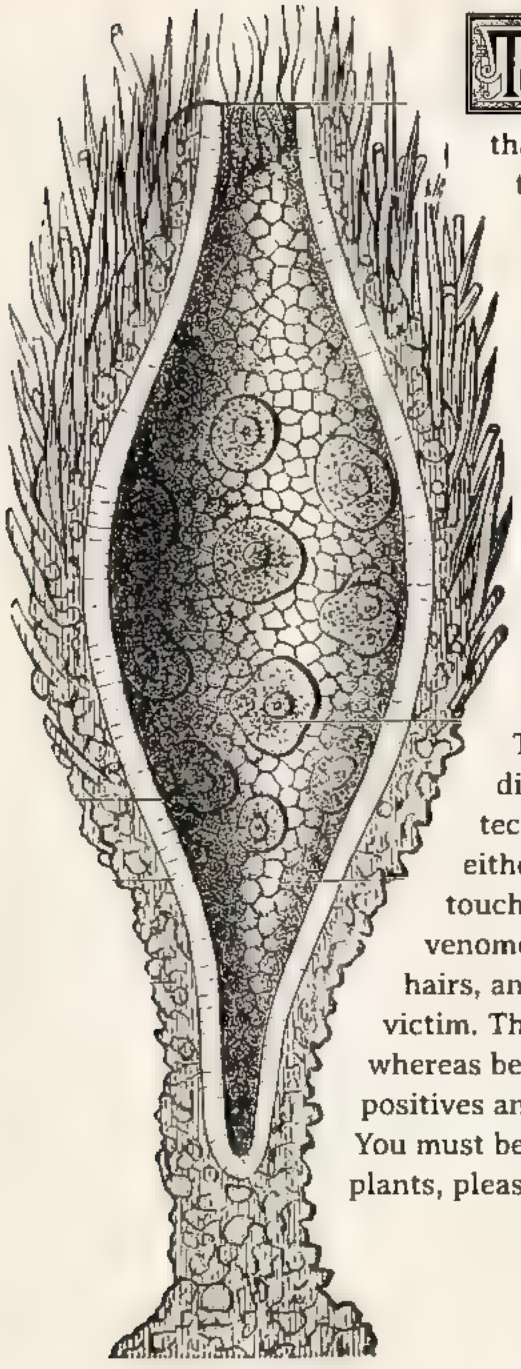
Plants with teeth may bite, though I really hope that is obvious. More importantly, though, when you are bitten you can easily become subject to other conditions like venom. Rarely does a plant just have a bite. More often, there is a second danger you will face shortly after. The good news, though, is that it is very rare for immediate death to occur from a bite. An example of this is the Fanged Geranium, whose bite will inflict a nasty poison that causes human skin to swell, bubble, and in some extreme cases, turn reddish with white spots. Fortunately, the best way to avoid the dangers of biting plants is simple: dragonhide gloves! Of course, should you deal specifically with large numbers of biting plants, dragonhide jackets and trousers would be a better guarantee, but for the small amount of time you will be handling them, just the gloves on their own should be sufficient to avoid 99% of biting plant mishaps.

There are also many plants with sharp leaves that can cut through your clothing and skin. They can be sharp enough to cut into arteries, and, well, there are too many places you don't want a deep cut! Some of these plants will keep to themselves unless touched, while others are very territorial and will attempt to fend you off if you get within a few feet of them, like the Spiky Bush, which will shoot its own sharp projectiles towards you to cut you. In terms of defending and protecting yourself from cutting plants, often a good pair of dragonhide gloves is all that is needed, though plants that shoot projectiles may also require evasive action or even the Shield Charm. Should all else fail, dittany

will cure what ails you most of the time, but be sure to see a healer in order to make sure the plant does not have any additional, potentially toxic properties.

As if all this wasn't enough, there are also plants that pummel, punch, ram, or hit. I know you can think of one right off the top of your head! These plants are some of the most active of this class, though not necessarily the most dangerous.

Class C: Toxic



This class deals with plants that are toxic to humans. Furthermore, it is the only one that has been allowed to overlap with non-magical plants due to the fact that any plant is toxic in the right amounts. Because of this, there are many Ministry of Magic regulations regarding how much of any plant may be used in a potion to avoid issues with toxicity. Plants under the toxic umbrella are further classified via a four level system based on the amount required to reach a lethal dose. Plants with a rating of four are so poisonous that contact with your bare skin may be cause for alarm, whereas plenty of plants that have rated at level one are still frequently used in potions or consumed raw. Since all plants have the potential to be toxic, you may be wondering if all plants fall into this class, but this is not the case. Plants have to be significantly toxic – enough to set them above the rest – in order to receive even the lowest rating.

There are two general types of toxic plants, though the difference isn't necessarily crucial to anyone but the most technical herbologist. First, there are poisonous plants that either contain or are covered in toxic chemicals released by touching or consuming a part of the plant. The second type, venomous plants, inject toxins directly through needles, fangs, hairs, and the like. The effects of the toxin often immobilize the victim. The Venomous Tentacula is an example of the latter, whereas belladonna is an example of the first. Both have their positives and drawbacks depending on the individual circumstances. You must be tired of me saying this, but for both varieties of toxic plants, please wear your dragonhide gloves!

Class D: Infectious

Infectious plants come in two subclasses: naturally infectious and diseased. Naturally infectious plants are able to spread viruses and other conditions even when in peak health. An example of this is Coughagus Ivy, which will give you all the symptoms of a cold if you wander near it. Diseased plants, on the other hand, have contracted an illness, and are now prone to spreading it. There is no specific plant that falls under this class as it is conditional. If a plant contracts an illness, it must be treated under Ministry regulations as a Class D plant. Some diseased plants can spread illnesses across scientific kingdoms, to humans or animals, particularly when we start looking into plants that have been crossbred or magically engineered. However, some simply spread illnesses from one plant to another (though this is of course not ideal, either)!

Class E: Burning

Burning plants are a wild bunch! These plants cause slow-to-rapid destruction of skin, fur, or any other material they touch. Some burning plants are even able to wear through dragonhide, though these are few and far between, and will only be covered towards the end of O.W.L. studies. The main problem with these plants is how they burn through many layers of skin and further. This can happen in a number of ways.

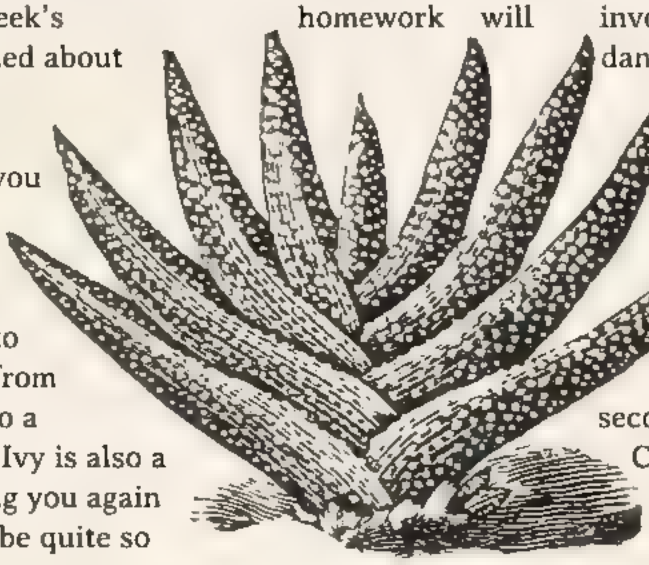
Some plants have strong acids or bases in them, which they will release when disturbed. This can then cause very serious burns, which require attention from a healer. Fire plants are the same, as when it comes down to it, a chemical burn and a regular burn cause similar damage. Fire Seed Bushes are an excellent example of this class, as their seeds cannot even be held with dragonhide gloves. Spells must be applied to keep the burning seed aloft until it cools sufficiently to be handled with dragonhide gloves. The opposite side of the heat spectrum also falls under this class. Freezing plants have stinging hairs which will cause a sensation similar to nettles, which we discussed in Lesson Five, however, they will slowly freeze your skin. While this does not sound too detrimental, be aware that frostbite is both very serious and very possible! In the most extreme cases like that of the Arctic Aloe, freezing plants can activate nerve impulses that will decrease your body temperature, causing your heart rate to slow down. Seek medical attention immediately if you believe you've come into contact with these plants.

Class F: Reactive

Our last class is very relevant to potion making, as it refers to how some plants and plant materials react to other materials, as well as how they react when touched. The Ministry of Magic has heavy regulations about how some of the more reactive plants can be transported, in case of contact with undesirable stimuli. Just what counts as an undesirable stimulus varies from one plant to another, but in general, it refers to a material that causes a reaction - in this case, usually an explosion, though acrid and poisonous puffs of smoke are also possible. Gunpowder Gloriosas are another magically enhanced species of plant that fall into one of the W.H.I.P.S. classes. While experimentation and research is welcomed in herbological circles to advance this area of magic, sometimes there are dangerous discoveries made, as is the case with these beauties. While Gunpowder Gloriosas have a load of beneficial properties, they are also known to combust (and frequently explode) whenever exposed to sunlight for more than exactly three hours a day. A picky plant, for sure!

Closing

I hope this hasn't completely scared you off the topic of herbology! Most plants we will be looking at are quite safe, and I assure you I will be thoroughly preparing you for any plants we cover that have specific considerations or dangers. This week's homework will involve a quiz on the key points you learned about dangerous magical plants. There is an optional, but highly recommended, second assignment, which requires you to write a short essay about a plant we did not mention that you believe falls under one of the classes, and your explanation or justification as to why. You may also discuss a plant from the lesson that you think could be put into a second class, such as arguing that Coughagus Ivy is also a Class E plant. I look forward to seeing you again next week; don't worry, our topic won't be quite so intense!



Lesson 8:
Grouping Your Garden



Begonia rex

Introduction

Our last lesson before the final! How time has flown! The two topics we will be focusing on today revolve around grouping your plants. First, we will look at some more specific details based on Lesson Three's information, such as how much sun a plant might need, or its colouration. Secondly, we will go over a crucial facet of herbological safety: properly labelling your plants!

Sunlight

The first part of categorizing plants can be tricky, but is absolutely crucial: finding how much sunlight is needed. The leaves of a plant are vital to the production of flowers and the overall well-being of the plant. This need for light ties into a process called photosynthesis, where the leaves absorb rays of sunlight and turn the light energy into carbohydrates. For us, this process would be like transfiguring sunlight into a Hogwarts feast! This is where the first set of categorizations comes from for herbologists. A plant may have a designation of moonlight, shade, partial shade, partial sun, or full sun. Though, occasionally, individual cases call for special categories. For example, "darkness" is more appropriate when talking about the amount of sunlight Devil's Snare requires, and Gunpowder Gloriosas, which we discussed last week, have additional notes next to the general designation of partial shade.

Moonlight

When a plant is labeled thusly, it means it requires reflected light to grow, rather than light that comes from a direct source. Usually, this means that the plant thrives in the moonlight. This is different from plants that require shade, as these plants are are often nocturnal and strongly linked to the lunar cycle or used in potions revolving around lunar magic.



Shade

Plants with this designation should be kept from too much sunlight. As the title suggests, a nice, shady spot is best for these. However, there is a bit of a spectrum, ranging from "deep shade" to "light shade." Deep shade is reserved for plants who thrive on the forest floor, where the light never reaches the

ground, whereas "light shade" usually just means that the plant does not do well in large amounts of direct sunlight, particularly in the afternoon, and should be planted away from the sunset, like on the east side of a hill or among taller plants.

Partial Sun or Partial Shade

While these two categories are often used interchangeably, they have slight differences. At the core, either of these designations mean that the plant in question needs between three and six hours of sun per day. However, an unwritten rule governs when these hours of sunlight are, and this is where the difference between the two lies. For partial shade, the plant should receive the three to six hours of sunlight in the morning to early afternoon, whereas for partial sun, the plant needs more intense late afternoon sun.

Full Sun

A plant that needs full sunlight requires at least six hours of exposure to sunlight a day. It does not matter overmuch when those hours are, just so long as it gets them. Additionally, those hours do not have to be consecutive. That is, the plant does not have to receive six straight hours of sunlight but can get three in the morning and three in the evening.

Colouration

The second part of categorizing plants is quite simple and relates to colour. Plants are categorized by both flower and leaf or foliage colour. The first has categories that are pink, red, orange, yellow, green, blue, purple, white, and black. Obviously, some of these are far less common than others, and flowers can be colours other than these. However, these are noted as the most common and standard flower colours as of the 1384 meeting of the Herbology High Commission.[4]

As far as a plant's foliage, there is also a range of possible colors, though the spectrum is much narrower. The generally agreed-upon common kinds of foliage include

[4] The Herbology High Commission is a large, international group of roughly every fifty-three countries that were once part of Great Britain, or currently still are. Each country has three representatives and at these meetings, decisions are made about categorizations, recognition of new plant uses and other research, and recommendations for their respective Ministries (or other governing bodies) regarding laws and regulations of plants. The standardized categorizations referenced in this lesson are actually from two separate meetings of this group. Many, such as foliage and flower colour, were decided when the first meeting was held in 1384, and the category for the different types of plants (such as biennial, tree, or fern) are based on the rulings from 1617, when some of the original categories were amended as necessary.

a vivid green, a bluish-green, a chartreuse or golden color, a grey or silver color (as pictured to the right), and a purple or dark red hue.



Type

The third part of categorizing plants is by type. You have heard me talk about a few of these types already, such as trees, annuals, and vines. The following are standard as of the 1617 meeting of the Herbology High Commission, which is when the official categorization information was determined that is still in place today, with very few changes. Before reading through these categories, please note that it is possible for a plant to be more than one (or even quite a few) of these things all at once. For example, something can be both a tree and a perennial, or a tree and a water plant. There are also a very few additional categories, but as you are just starting out your herbological journeys, it's best not to overwhelm you!

Annual

A plant with a lifespan of a year (or less). A large amount of plants fall into this category, such as basil and morning glory.

Biennial

A plant with a two year lifespan. Forget-me-nots, black-eyed Susans, and Hagweed all fall into this category.

Perennial

A plant which lives a relatively long period of time (as compared to previous categories), such as trees.

Bulb

This type of plant stores energy to keep through winter, and usually does not possess seeds. Lilies are one example of a plant that is categorized as a bulb.

Evergreen

A plant that keeps green foliage throughout the year. We have many non-magical and magical evergreens in our Great Hall every year for Christmas.

Fern

A plant that has feathery or leafy fronds. They reproduce with spores, rather than seeds or bulbs. Shatterferns are an excellent, though delicate, example of a fern.

Herb

An herb is any plant with flowers, leaves, or seeds which may be used for medicine, flavouring, food, or perfume. This vague definition allows almost all plants to be categorized as herb, hence the reason this subject is called Herbology!

Moss

This close-growing greenery likes very damp places and can grow like a carpet. Interestingly, these plants are one of the few that do not need any soil at all to grow, and therefore can grow directly in water and on rocks. They need very little in the way of nutrients. Whispermoss is one such example, which grows in Japan.



Thuidiopsis sparsa

Shrub

This is a rather woody plant that is smaller than a tree, but very similar. Shrubs consist of several stems rising from the ground. Roses are an example of a shrub.

Tree

Also a woody plant, trees have one stem or trunk that grows to considerable heights and may have branches stemming from its trunk. They are always a perennial.

Water Plant

Any plant that grows while having at least a centimetre of water surrounding it above ground at all times. Gillyweed is one such plant.

Vine

A plant that is woody and climbs or trails along objects, usually possessing thin stems. An example of this is Creeping Ivy – a plant that not only will slowly creep over rocks, roofs, and fences to cover them, like normal ivy, but can also move itself via a slow crawl to a more habitable location.

Height

The next characteristic plants are categorized by is height. For a time, there were categories revolving around height, such as under a foot, over fifty feet, etc. However, these categories were eventually abandoned in favor of the more natural urge to list the minimum and/or maximum heights a plant can attain. Usually, just the upper limit is listed, as all plants start off as tiny shoots!

Special Features

Of course, there are some unique qualities that plants can have that just don't fall into any category, but are still very important details to consider! These qualities are considered "special features." Magical qualities can also be listed here, though they are much more benign than the characteristics of plants that fall into the W.H.I.P.S. classes. Additionally, non-magical special features are included here as well. A sampling of important or interesting features are as follows:

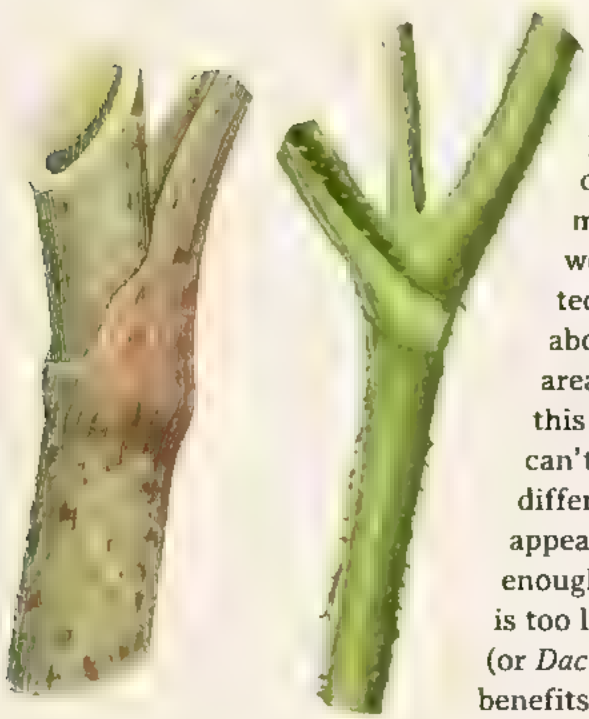
Spring flower - plant blooms in the spring season
Summer flower - plant blooms in the summer season
Fall flower - plant blooms in the fall season
Winter flower - plant blooms in the winter season
Reflowering - plant blooms multiple times throughout the year
Constant - plant remains the same all year (like an evergreen)
Low maintenance - plants is easy to take care of
Attraction - plant attracts birds, bugs, animals, etc. (there will usually be a list of the specifics)
Fragrant - plant has a strong smell
Solution - plant solves a common herbological challenge or problem, such as altering the consistency of dirt or helping prevent the erosion of slopes
Drought tolerant - plant can survive periods without water
Cold hardy - plant can tolerate very low temperatures without dying

Before we move onto the next section of the lesson, I would like to take this opportunity to show you an example. First I will show you a blank template for the plant profile and then follow up by filling it out with the details of the English rose.

```
Common name (Latin name)
Type(s)
Sunlight
Height range(s)
Flower color(s)
Foliage color(s)
Feature(s)
```

```
English rose (Rosa)
Herb, shrub, perennial
Partial to full sun
20 feet
Flower: green, blue, pink, red, orange, white
Foliage: chartreuse or gold
Features: spring, summer, and fall flower; helps slow
   erosion of slopes; fragrant; low maintenance
```

Labeling Plants



Before we leave the world of technical details behind, there is one more thing we need to discuss: the proper way to label plants after you have collected samples. Depending on your success in your own greenhouse plots, you may have already started to do this, so the sooner we discuss it, the better. Learning proper labeling technique is, truthfully, just as important as learning about the six W.H.I.P.S. classes. Ignorance in either area is just as dangerous. Don't believe me? Imagine this scenario, you want to make a delicious tea, but can't remember which of the identical roots in two different containers are which. Sometimes texture, appearance, scent, and all the magic in the world isn't enough to tell the difference between two plants before it is too late. For example, the root of Queen Anne's lace (or *Dacus carota*) makes a brilliant tea with health benefits, whereas the root of the hemlock plant contains

the highest concentration of poison in nearly any plant, and is famed for causing paralysis and respiratory failure. Not only are roots generally difficult to tell apart even for some of the most experienced herbologists, but the leaves and flowers of the plants are also look-alikes! Certainly not an error you want to make! As an aside, the key to telling the plants apart is by the stems; poison hemlock has spots of purple on theirs, while Queen Anne's lace (also known as wild carrot) has a fully green one adorned with fine hairs.

In any case, herbologists discovered, after the unfortunate accidents of others, that it was important to make a universal labeling system. A common form was agreed upon over time by herbologists, and in 1783 was made the lawful format for British apothecaries to use by the Ministry of Magic. Individuals not selling their plants can technically label them however they would like, and many potioneers have personal methods they prefer for their own stores. However, while you are at Hogwarts, you will use the standard form, as I do not want any accidents. More, it's good practice!

Here is a sample template, as well as an example of that template filled out correctly, taken from my own stores.

```
Latin name (Common name)                    W.H.I.P.S. Class(es)
Date stored (Year, month, day)              (Level, if applicable)
What part of the plant is in the jar
Details on classification
```

```
Frivli exactimuso (Blue Sunlight)           Class A (3)
1996.07.21
Leaves and Petals
Scent of Petals Causes
  Confusion/Hallucinations
```

Based on this, anyone trained in herbology should know what they are getting into if they, for some reason, need to open a container or vial labelled by someone else. It certainly makes collaboration easier for researchers, and simplifies buying from and selling to apothecaries. On that note, potioneers sometimes include shorthand notes of common potions the ingredient may be used in, though it's obviously not necessary. You will not be marked wrong for doing so, should you like to. In fact, should you wish to include other information, such as during what phase of the moon the plant was harvested, where it was grown, or even what strain it is (should you ever wish to experiment in crossbreeding), be my guest. The only requirement is that you have the above standard classification displayed prominently and clearly among all the rest of the information.

Closing

For now, we'll close up shop for this week. That was a fair bit of information. I hope it wasn't too dry or overwhelming. Next week's lesson is our last for the year, so I hope you are ready! The corresponding assignments are available to you; please don't hesitate to ask me if you have any questions or need any clarification on the topics discussed in the lesson. See you next week!

Lesson 9:
Herbology Intertwined



Sopophorous zygmunti

Introduction

So, this concludes our year together in Herbology 101. For starters, I am humbled by the effort and dedication so many of you have shown in this class. Congratulations on making it this far! I have hope for herbology in future generations if you all are going to continue to be so willing to go out there and get your hands dirty!

This year we covered some of the basic uses of herbology. We looked a little bit at safety when working with plants, caring for plants, the use of herbology in other subjects, as well as magical and non-magical plants and how to distinguish between the two. Over the next few years, we will be going further into each of these fields, with next year being your practical year. Next year's class will be structured a bit differently, but I can promise you that you will have an excellent time.

Before you leave today, I would like to talk with you about the field of herbology and its overlap in various areas. I know it's a bit early to have your future all decided, but it's never too early to start thinking about your options and how your education can benefit you. Mostly, we will be discussing the use of herbology in other subjects. Earlier in the year we briefly touched on the use of herbology in potions, as the classes are clearly linked, but in this lesson, we are going to take a more in-depth look at other subject areas where herbology is utilized. Shall we begin?

Cross Curricular Uses of Herbology

As you might be realizing, all areas of magic are at least a little bit intertwined. Every little thing you learn has an effect on your other courses, and more importantly, your life. It shapes who you are! That being said, we aren't going to go over every single course and its relation to herbology. However, we will take a moment or two to discuss the ones with the closest relationships.

Astronomy

While we won't talk in depth about astronomy's relationship to herbology until well into next year, this field of study does play a big role! Whether you're growing a nocturnal garden, harvesting based on the phases of the moon, or making sure you're

picking a plant under the correct planetary or celestial influence, you're using astronomy in your herbological work! Mixing the two fields can be complex work, but you will at least be learning the basics to help you in whatever you choose to do after Hogwarts, and there will be plenty of resources for those who wish to take their studies further.

Charms

While less crucial to the study as a whole than some of the other fields we're mentioning today, charms and herbology overlap on happy occasions. Have you ever had a Christmas tree sing carols to you as you pass by? What about a serenading rose on Valentine's Day? Perhaps you've received a daisy or daffodil singing "Happy Birthday" to you? While there are various charms that may be placed on plants, people are often most familiar with singing herbs. Additionally, there are obviously many charms that we use in herbology to augment our care of plants, a few of which we have seen this year, and many others that we will learn and use in the years to come.

Care of Magical Creatures



While you won't be learning about food chains and their importance to animals until your Fourth Year of Care of Magical Creatures, I assure you that plants are a crucial part of them. Herbs are at the bottom of every food chain, thus making herbology essential to the survival of any animal. Plants are eaten by creatures and insects, who are then in turn eaten by other creatures (or insects). There's no way to escape it. Every animal – predator or prey – is influenced by the plants in its ecosystem. If there is a shortage, or a species dies out, the whole chain suffers. Herbologists help us to keep plants healthy and ecosystems in check, even when things go wrong.

Another reason herbology is important to the field of magizoology is that certain herbs attract insects or animals via their scent. Magical (and non-magical) birds enjoy the scent and colours of very particular magical flowers, and the same goes for fairies and a few other magical creatures. Some creatures enjoy rolling in certain herbs to cover themselves with the scent, which disguises them or attracts a mate. Any tracker working in the Ministry's Department for the Regulation and Control of Magical Creatures is aware of what herbs and scents will attract which beasts, and also which scents will

ward off other unwelcome creatures when working in the field. Lastly, there are many smaller areas of overlap, such as animals that use plants as cover to hunt or others that use them in the creation of their homes, nests, or dens. It's impossible to completely separate animals from plants!

Defense Against the Dark Arts

Herbology has an interesting place in the field of defense against the Dark Arts. As you may know, Dark wizards have no issues pushing the envelope to stay ahead of the game – and one step ahead of their targets and enemies – and often utilize plants to do so. One common example of the use of Dark magic on plants would be "field curses."



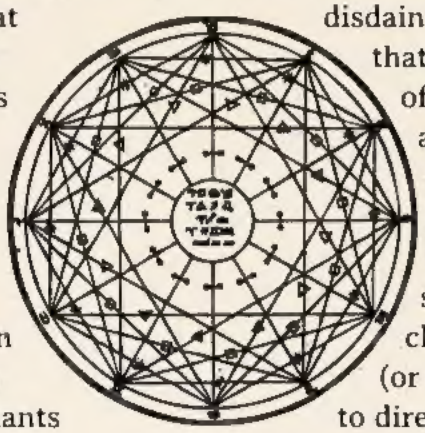
While not a kind of curse in and of itself, Dark wizards enchant a field of tall grass (or really a large expanse of any plant, such as strawberries, daisies, poppies, etc.) so that the moment an unsuspecting victim wanders into the boundaries of the field, he or she becomes afflicted with a specific kind of curse. The most insidious thing about these kinds of curses is that this tactic is often both unexpected and nearly impossible to detect if you are not checking every group of plants larger than a cluster for traces of Dark magic. After all, when on a hunt for Dark witches, or fleeing pursuers, who would be looking at their feet to note that they had just crossed a threshold into a field of poppies? These curses can also be applied to forests, but as this is much easier to notice and requires much more effort, this is not commonly done.

Some of the effects of field curses include causing the afflicted person(s) to go mad with hunger, fall into a deep sleep, experience hallucinations, or experience growing confusion, just to name a few. Aurors are often trained to react to such situations logically and trust their gut. If something seems amiss, they are to Apparate out of the area immediately to see if it makes a difference. Of course, these defenses sadly don't work for Muggles, though some can overcome the effects and make it out via sheer strength of will.

A second way Dark wizards utilize herbology is by using dangerous herbs for assassination attempts. Sometimes that means simply using various nefarious poisons, whether via the use of potions or the poisonous herbs on their own. If that wasn't enough, however, there are many magical plants that can perform the terrible act for the Dark witch or wizard in question. Plants such as the Devil's Snare, Venomous Tentacula and other dangerous or man-eating plants can be, and have been, involved in assassinations (both attempts and successes), without the assassin having to be there at the time!

Divination

Ah, divination! Now, some of you may think little of this field of study, but remember, there are many that disdain herbology as well, and we know there's no reason to do that! All magic and studies of magic are important. Methods of divination that physically use herbs – such as alphitomancy, tasseography, or xylomancy (some of which you will study here at Hogwarts) – are perhaps the most obvious areas of overlap between herbology and divination, and as such you will be learning about some of these subjects in more detail in your Divination classes in years to come. Additionally, in tarot reading (or in other forms of divination), some seers use plants to direct their magical energies, create a focused or calm environment, or even burn them to cause slight magical effects.



Potions

I know, I know. We've already talked about how plants are utilized in potions (and will continue to do so). However, I couldn't resist a chance to talk about some broader, overarching uses of herbology in potions. First, because plants are easier to obtain fresh and alive (as compared to animals and their parts), plant ingredients are often added to potions when freshness is a factor in the potion's effect, especially in beauty potions. Additionally, non-magical plants are excellent for adding to potions, especially in beginner brews, because they reduce the risk of explosions or negative magical reactions significantly.

Closing and Final Notes

There you have it, a spread of fields for you to mull over during summer break. I hope at least one of these areas sparked something inside you today, as I always love nurturing future herbologists, or those in related professions. If not, at the very least, I take solace in the fact that I have four more years to share my love of plants with you (or more if you stay with me after your O.W.L.s), and hopefully cause your attachment for and interest in them to grow!

Remember that next year will be a much more practical one. To aid me in that endeavor, you will need to actually collect (or somehow procure) dandelion seeds so that you may grow the plant throughout your studies next term. Of course, if you have a strong preference towards another easy to grow (and quick growing) plant, or for some

reason your situation does not allow for you to grow dandelions specifically, you may grow another plant. If you are unsure as to whether your choice of plant is suitable for the project, please contact me with your questions. Good luck on your final and I look forward to seeing you all next year!



